OFER 8411

LIFE SCIENCE AREAS OF NATURAL AND SCIENTIFIC INTEREST IN SITE DISTRICT 6-8

A Review and Assessment of Significant Natural Areas in Site District 6-8

September 1984

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Ontario

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For convenience, this report may be referred to as OFER 8411. It is one of a number of Open File Ecological Reports comprised of reconnaissance surveys and inventories of ecological areas in Ontario.

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Reference copies of this report are available in the above offices, and the Natural Resources Library, 4th Floor, Whitney Block, Room 4540, 99 Wellesley Street West, Toronto, Ontario M7A 1W3. Copies have been sent to university libraries in Southern Ontario.

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PREFACE

In 1977, the Parks and Recreational Areas Programme of the Ontario Ministry of Natural Resources, with special funding approved by Management Board of Cabinet, initiated a provincial survey of natural areas in connection with park system planning. A parallel initiative focused on the identification of geological sites representative of Ontario's earth science diversity. The mandate for these surveys stem from the protection objective of the Ontario Provincial Parks Policy (1978), which is "to protect provincially significant elements of the natural and cultural landscapes of Ontario."

The overall objective of the natural areas survey is to identify a series of ecological areas that comprise the spectrum of natural landscapes, environments and biotic communities in Ontario. This objective issues from a Cabinet endorsed guideline of the 1978 parks policy which recognizes the role of provincial parks in protecting "a system of features representative of Ontario's life science history and diversity". With this aim, technical guidelines help to direct the selection, documentation and evaluation of natural areas throughout the site regions and site districts of the province.

Between 1980 and 1982, evaluations of remnant natural areas were undertaken in the site districts within the Central and Southwestern Regions of the Ministry. Through these assessments, the finest natural areas were chosen to complement natural features already represented within a series of Nature Reserves proposed through an earlier review of the provincial parks and park reserves (Lindsay and Hanna, 1980). In addition, natural areas identified through this survey complement the Candidate Nature Reserves already proposed for the Niagara Escarpment Planning Area (Parks Planning Branch, 1976).

The present report was issued as a draft in 1980 under the title *An Identification and Evaluation of Life Science Candidate Nature Reserves in Site District 6-8.* Now in the final edition, it is one of a series of such reports which have been completed to date and are available as 'Open File Ecological Reports'. The findings of these reports have provided the basis for many of the 'Recommended Provincial Parks' announced by the Minister in June 1983, and the 'Areas of Natural and Scientific Interest' designated in the District Land Use Guidelines also released at that time.

Although evolution of the land use planning process since 1981 has produced new terminology incorporating natural areas, this nomenclature is not used in this report. Rather, natural areas are referred to as either Candidate Nature Reserves or as Significant Sites. This is distinct from the new terminology, as used in the District Land Use Guidelines (OMNR, 1983), which groups natural areas and geological sites as Areas of Natural and Scientific Interest (ANSIs).

According to the District Land Use Guidelines, ANSIs may vary in level of significance. The most significant of these, those referred to as Candidate Nature Reserves in this report make the greatest contribution to the Ministry's protection objective and are listed in the District Land Use Guidelines. ANSIs which contribute to a lesser degree to the provincial protection objective are referred to as Significant Sites in this report and are considered to be at least regionally significant. The policy statement for Areas of Natural and Scientific Interest is appended.

Site district evaluations in the Central and Southwestern Regions of the Ministry were carried out by three biologists — K.M. Lindsay, R. Hanna and R. Klinkenberg. Lindsay coordinated and directed the work, and evaluated Site Districts 6-5, 6-7 and 7-2. Hanna examined Site Districts 6-1, 6-6, 6-8, 6-13, 7-4, and 7-6; Klinkenberg examined Site Districts 7-1 and 6-1. While all three biologists shared common objectives and collaborated in developing evaluation techniques, each undertook field work and evaluation using methods appropriate to their respective site districts.

Each site district report includes an analysis and discussion of the natural features and natural areas of the site district, a discussion of the methodology, recommendations for further work and possible methods of natural areas protection. Check-sheets for Candidate Nature Reserves are appended, as are brief descriptions of other natural areas in the site district.

The information collected during the site district assessments forms the foundation of a provincial natural areas data base. This data base is being updated as new information is obtained. It is an important component for the planning process at district, regional and provincial levels of the Ministry. Readers are invited to add to the data base, either by contributing to studies conducted by the Ministry, or through information contributed to other groups seeking to protect natural areas.

Although site district assessments were designed to identify those natural areas which contribute mainly to the protection objective of the Ministry, this information should prove useful to regional and local governments, conservation authorities and other organizations involved with the identification and protection of significant natural areas. Protection of natural areas may be achieved in several ways, including the purchase of sites by outside agencies. Where natural areas designated as ANSIs occur on public lands managed by the Ministry, it will ensure that the land uses and activities which occur, provide for the protection of identified values. On private lands, the Ministry will, through cooperation with others, attempt to ensure that landowners are aware of the significant features on their properties and seek the owners' cooperation in protecting such features.

ACKNOWLEDGEMENTS

Many people contributed to the preparation of the site district reports. H. J. Featherston, H. Pronk, J. Griffin and G. Rodgers (Parks and Recreational Areas Section, Central Region, OMNR) played a major role in the administration of this project, providing continual and much appreciated logistic and technical support. G. Murphy and E. Martelle (Parks and Recreational Areas Section, Southwestern Region) also contributed substantially to this project. Technical direction for the project came from an informal committee composed of the Parks Coordinators of both regions, H. J. Featherson, G. Murphy and E. Martelle; the Regional Park Planners, G. Rodgers, W. McNab and I. Seddon; and T. J. Beechey(Life Science Coordinator, Parks and Recreational Areas Branch, Queen's Park). Discussions on technical matters with T. J. Beechey, W. McNab and G. Rodgers proved especially valuable. This report was prepared under contract to J. E. Hanna Associates Inc.; the Ontario Ministry of Natural Resources, however, undertook all aspects associated with report production.

Throughout the course of this project, K. Lindsay provided regular direction, encouragement and advice. P. Terpstra's assistance with background research, data analysis, map preparation, field work and report editing has been invaluable. L. Sajnovic supervised report typing with proficiency and looked after many other details.

The author would like to thank E. Hanna (J. E. Hanna Associates Inc.) for contributing specifically to the preparation of the Site District 6-8 report. Mr. Hanna discussed freely the method of site selection, provided information on specific sites and commented on drafts of this report. His ideas and support are appreciated and are reflected in the context of this report.

The draft Site District 6-8 report was reviewed by selected experts familiar with the geographical area under study in Site District 6-8. The comments made by R. Jones and S. Varga are appreciated and have been added to the data base for ANSIs at district and regional offices and the main office of the Ministry. These reviews generally confirmed the selection of the ANSIs made by this site district study.

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1. Candidate Nature Reserves and Significant Sites in Site District 6-8 within Central Region

SUMMARY

Site District 6-8 is characterized by a rolling till plain of drumlinoidal hills, drumlin fields and eskers with intervening wide river valleys, several clay basins and a limetstone plain. Extending in a wide band from south of Lake Simcoe eastward to the Bay of Quinte, it includes Lake Scugog, Rice Lake and the southern section of the Kawartha Lakes. The majority of the site district is intensively used for agriculture and urban activities being characterized by mixed and dairy farming, vegetable gardening in the reclaimed Holland Marsh area, the Trent Canal lock-system and the towns of Peterborough, Lindsay and Belleville.

An overview of the physiographic regions and component landforms within Site District 6-8 suggested that the main natural or relatively undisturbed vegetation-landform features in the Central Region portion of the site district are drumlins (partially forested and forested), remnant post-glacial shorelines, marshes, bogs and swamps. Seven candidate nature reserves, one of which is a provincial park reserve, were selected to represent the major vegetation-landform features of the site district.

UPLANDS	
Drumlin-Marsh Complex	Harris Island Park Reserve and Proposed Marshland/Drumlin Addition (31D/1 265973)
Post-glacial Shoreline	Allandale Lake Algonquin Bluffs (31D/5 010100)
WETLANDS	
Marsh	Scugog Marsh (31D/2 670830) Holland River Marsh (31D/4 180940)
Bog	Cavan Bog (31D/8 055040) Goose Lake Wetlands (31D/7 700210)
Swamp	Emily River Swamp (31D/7 925220)

All seven candidate nature reserves are recommended for protection. Five of the seven are highlighted because of their outstanding contribution: Harris Island Park Reserve and Proposed Marshland/Drumlin Island Addition, Allandale Lake Algonquin Bluffs, Scugog Marsh, Goose Lake Wetlands, and Emily River Swamp.

1. INTRODUCTION

Site District 6-8, a part of Site Region 6, spans a wide band from south of Lake Simcoe eastward to the Bay of Quinte including Lake Scugog, Rice Lake and the southern section of the Kawartha Lakes (Figure 1). The eastern boundary of the Central Region of the Ministry of Natural Resources, which follows the Trent River east of Rice Lake and the line between Peterborough and Hastings Counties, forms the eastern limit of the study area. A portion of Site District 6-8 falls outside this study area; within the Eastern Administrative Region of the Ministry.

A site region is defined as an area of land within which the response of the vegetation to the features or the landform follows a consistent pattern (Hills, 1959). Site Region 6 is described as a gently to rolling terrain of ice laid materials deeply covering the bedrock over 80% of the area. Local plains of lacustrine deposits with little relief and limestone plains shallowly overlain by drift are restricted to several sites which are discussed later in this section. Normal mesic, normal dry and hot dry sites (as defined by Hills, 1959) are characterized by sugar maple/beech/hemlock, sugar maple/oak/ash/ and oak/ash respectively. Hemlock, yellow birch, spruce and white cedar occur on wet sites. Each site region is further subdivided according to characteristic physiographic zones which set apart fairly large areas; these Hills called site districts. Site District 6-8 is described as an area of drumlinized till with local areas of water-lain silt and clay.

The categorizations and boundaries proposed by Hills do not coincide precisely with those of other authors. In particular Chapman and Putnam (1973) recognize five distinct physiographic regions partly fall within Site District 6-8. The majority of the site district is contained within the Peterborough Drumlin Field, a physiographic region typified by drumlinoid hills, drumlin fields and eskers interrupted by intervening wide river valley basins with muck, spillway and sand deposits. The Schomberg Clay Plain, a region of lacustrine clay, silt and sand deposits is shown near Schomberg, Newmarket and Lake Scugog in Site District 6-8. The Simcoe Lowlands are restricted to the northwestern portion of the site district with a landscape dominated by ancient shorelines, sandplain and muck deposits. The flat to undulating limestone in the extreme eastern portion of the site district (within Eastern Region) is part of the Napanee Plain. Lying south of the Trent River, also in Eastern Region, the Iroquois Plain comprises drumlins and clay flats.

Table 1 presents an analysis of the landscape of Site District 6-8 and its remaining natural features. The physiographic regions that lie within the site district are listed in order of importance. For each physiographic region, componet landforms are given, based on Chapman and Putnam, 1972. As well, the percentage and types of natural areas remaining is estimated based on a review of the 1:50,000 topographic maps covering the site district.

Following this overview of the site district, 5% of the site district was found to be in a relatively natural and undisturbed state. The most common remnant natural features in the study area are interdrumlin lowland forests, swamps, marshes, partially forested drumlins and post-glacial shorelines.

Harris Island Park Reserve, the only park holding available to represent the features of the site district, contains a small marshland area and two small drumlin islands. Consequently, a nature reserve site selection program was undertaken to identify additional sites which could provide representation of the dominant vegetation-landform features. The methodology of the natural area overview, identification of features not represented by Parks, site selection procedure and brief dicussion of the results and recommended sites, follows.

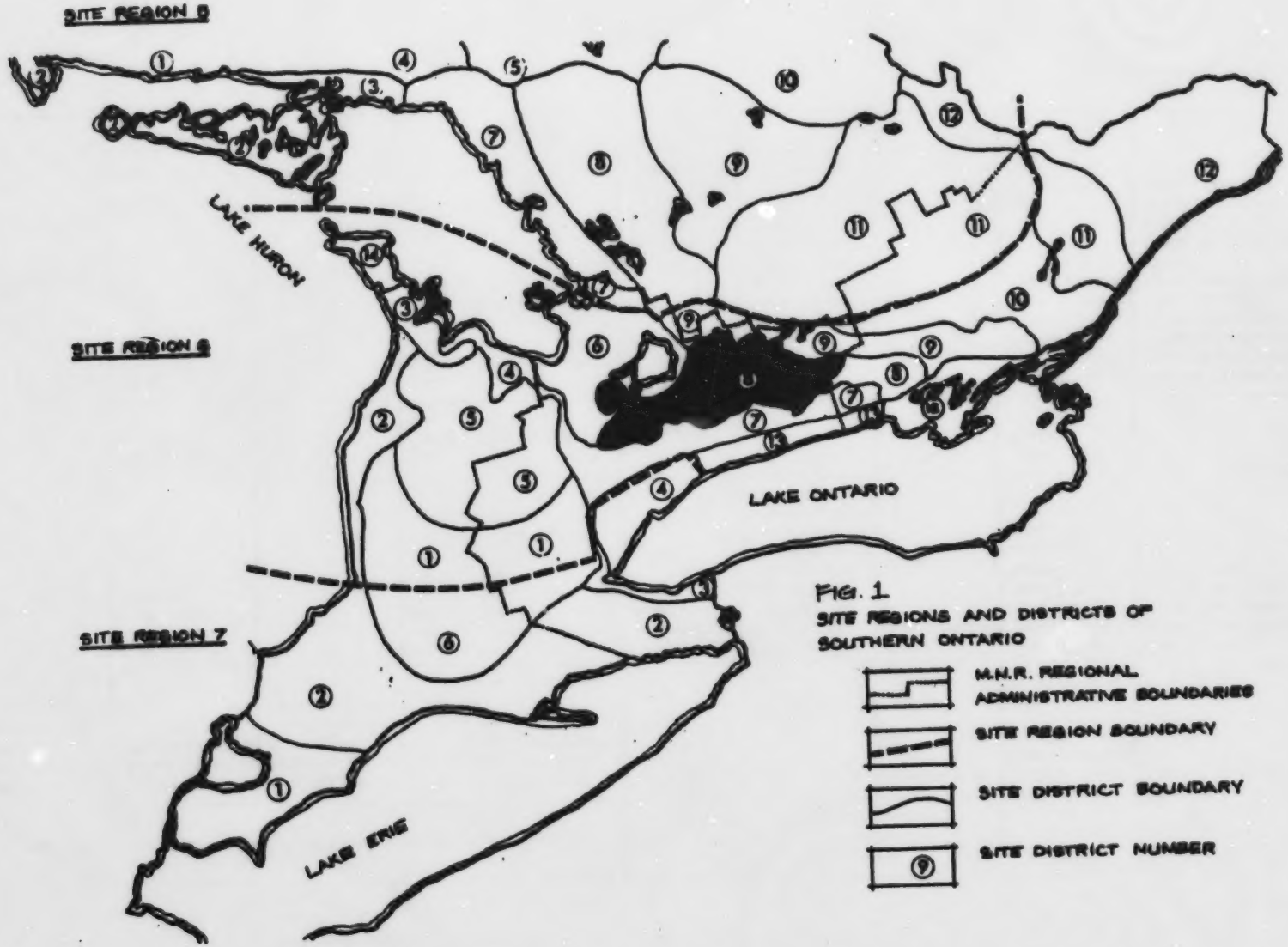


FIG. 1
SITE REGIONS AND DISTRICTS OF SOUTHERN ONTARIO

TABLE 1. SUMMARY OF THE NATURAL FEATURES ANALYSIS AND NATURE RESERVE SELECTION PROCEDURE BY PHYSIOGRAPHIC REGION AND LANDFORM FOR SITE DISTRICT 6-8

ANALYSIS OF NATURAL FEATURES OF SITE DISTRICT					FEATURES REPRESENTED BY CANDIDATE NATURE RESERVES IN PROVINCIAL PARKS/RESERVES			FEATURES MISSING FROM PROVINCIAL PARKS AND PARK RESERVES	CANDIDATE NATURE RESERVES SELECTED TO REPRESENT THE MISSING FEATURES
Physiographic Regions Wholly or partly within Site District	Proportion of Site District covered by Physiographic Region	Landforms found within Physiographic Region	Proportion of Physiographic Region occupied by each Landform	Types of Natural Features remaining on these Landforms and proportion remaining in a Natural Condition	Park Name	Feature(s)	Approx. Area		
Peterborough Drumlin Field (small parts in 6-6, 6-7 and 6-9)	70	drumlinized till plain with drumlin fields	60	-5% -mainly farm land -only a few forested and partially forested drumlins exist -40% lowlying areas between drumlins in drumlin fields	Harris Island Park Reserve	-two small drumlin islands (sugar maple-red oak and white pine-large-toothed aspen upland forest)	16 ha (40 acres)	-additional drumlinoidal hills and drumlins -lowland between drumlins	Harris Island Park Reserve and Proposed Marshland/Drumlin Island Addition (31D/1 265973)
		sand plain	10	-5% -farmed except for few river wetlands	-	-	-	-river swamp systems	-
		muck	10	-95% -marsh/swamp systems in broad river valleys, lakes and rivermouth bays (Rice Lake, Lake Scugog)	Harris Island Park Reserve	-marshland (pondweed meadow, wild rice beds, cattail marsh, alder sweet-gale-cattail scrub marsh)	59 ha (146 acres)	-additional marshland/ swamp zonation -lake/river swamp systems	-Harris Island Park Reserve and Proposed Marshland/Drumlin Island Addition (31D/1 265973) -Cavan Bog (31D/8 055040) -Goose Lake Wetlands (31D/7 700210) -Emily River Swamp (31D/7 925220)
		esker	10	-0% -farmed; quarried	-	-	-	-	-

TABLE 1. SUMMARY OF THE NATURAL FEATURES ANALYSES, AND NATURE PRESERVE SELECTION PROCEDURE BY PHYSIOGRAPHIC REGION AND LANDFORM FOR SITE DISTRICT 6-8

ANALYSIS OF NATURAL FEATURES OF SITE DISTRICT					FEATURES REPRESENTED BY CANDIDATE NATURE RESERVES IN PROVINCIAL PARKS/RESERVES			FEATURES MISSING FROM PROVINCIAL PARKS AND PARK RESERVES	CANDIDATE NATURE RESERVES SELECTED TO REPRESENT THE MISSING FEATURES
Physiographic Regions wholly or partly within Site District	Proportion of Site District covered by Physiographic Region*	Landforms found within Physiographic Region	Proportion of Physiographic Region occupied by each Landform	Types of Natural Features remaining on these Landforms and proportion remaining in a Natural Condition	Park Name	Feature(s)	Approx. Area		
Peterborough Drumlin Field cont'd	70	spillway	5	-95% -mainly wetlands (Indian River, Ouse River)	-	-	-	-	-
		kame	5	-1%	-	-	-	-	-
Schomberg Clay Plain (also in 6-6 and 6-7)	15	clay plain with drumlins	89	-5% -mainly farmed -few river and river-mouth wetlands -few small woodlots -all drumlins farmed except northwest of Trenton	-	-	-	-marsh/swamp	-
		sand plain	5	-1% -farmed -large marsh complex (Lake Scugog)	-	-	-	-marsh/swamp	Scugog Marsh (31D/2 670830)
		muck	5	-95% -wetlands	-	-	-	-	-
		esker	1	-0% -farmed; quarried	-	-	-	-	-

TABLE 1. SUMMARY OF THE NATURAL FEATURES ANALYSIS AND NATURE RESERVE SELECTION PROCEDURE BY PHYSIOGRAPHIC REGION AND LANDFORM FOR SITE DISTRICT 6-8

ANALYSIS OF NATURAL FEATURES OF SITE DISTRICT					FEATURES REPRESENTED BY CANDIDATE NATURE RESERVES IN PROVINCIAL PARKS/RESERVES			FEATURES MISSING FROM PROVINCIAL PARKS AND PARK RESERVES	CANDIDATE NATURE RESERVES SELECTED TO REPRESENT THE MISSING FEATURES
Physiographic Regions Wholly or partly within Site District	Proportion of Site District covered by Physiographic Region	Landforms found within Physiographic Region	Proportion of Physiographic Region occupied by each Landform	Types of Natural Features remaining on these landforms and proportion remaining in a Natural Condition	Park Name	Feature(s)	Approx. Area		
Simcoe Lowlands (also in 6-6 and 6-9)	5	sand plain with beaches, shoreline	50	-1% -mainly farmed except for shorelines and one large woodlot northeast of Beaverton	-	-	-	-post-glacial shoreline	Allandale Lake Algonquin Bluffs (31D/5 010100)
		muck	40	-20% -farmed -large marsh complex (Holland River)	-	-	-	-marsh/swamp	Holland River Marsh (31D/4 180940)
		drumlinized till plain	10	-0% -farmed	-	-	-	-	-
		esker	1	-0% -farmed	-	-	-	-	-
Iroquois Plain (Eastern Region)	5	sand plain	60	-1% -farmed	-see Eastern Region	→			→
		drumlinized till plain	20	-1% -farmed except for a few drumlinoidal hills and drumlins south of Trent Canal	-see Eastern Region	→			→
		clay plain	10	-1% -mainly farmed	-see Eastern Region	→			→

TABLE 1. SUMMARY OF THE NATURAL FEATURES ANALYSIS AND NATURE RESERVE SELECTION PROCEDURE BY PHYSIOGRAPHIC REGION AND LANDFORM FOR SITE DISTRICT 6-8

ANALYSIS OF NATURAL FEATURES OF SITE DISTRICT					FEATURES REPRESENTED BY CANDIDATE NATURE RESERVES IN PROVINCIAL PARKS/RESERVES			FEATURES MISSING FROM PROVINCIAL PARKS AND PARK RESERVES	CANDIDATE NATURE RESERVES SELECTED TO REPRESENT THE MISSING FEATURES
Physiographic Regions Wholly or partly within Site District	Proportion of Site District covered by Physiographic Region*	Landforms found within Physiographic Region	Proportion of Physiographic Region occupied by each Landform	Types of Natural Features remaining on these landforms and proportion remaining in a Natural Condition	Park Name	Feature(s)	Approx. Area		
Iroquois Plain (Eastern Region) cont'd	5	muck	8	-95% -extensive wetland complex (Percy Reach)	-see Eastern Region				→
		esker	2	-0% -farmed	-see Eastern Region				→
Napanee Plain (Eastern Region)	5	bevelled till plain with drumlins	100	-5% -few wetlands and woodlots	-see Eastern Region				→
Oak Ridges Moraine (majority in 6-7)	<1	see Site District 6-7 report							→
Dummer Moraines (majority in 6-9)	<1	see Site District 6-9 report							→

2. METHODOLOGY

The following section outlines the four steps undertaken during the natural area overview and site selection procedures.

(i) Natural Features Analysis

The Protection Objective of Ontario's Provincial Parks Policy (1978), is "to protect provincially significant elements of the natural and cultural landscape of Ontario". Following an assessment by site district of the life science features with nature reserve potential in the Parks System, it was necessary to determine which features were not represented by Parks and which features would need to be included to meet the protection goal of this policy.

Site districts, as defined by Hills, (1959), served as the sole basis for identifying and selecting vegetation-landform features which needed to be included in the Parks System to represent and preserve the diversity of landscape types remaining. However, the physiographic regions proposed by Chapman and Putnam were also considered primarily at the overview stage, Step (i). By segregating the site district in this way, the identification of the full spectrum of features to be represented was facilitated. Throughout the text of this report, reference is made to these physiographic regions, however, site selection was based entirely on the analysis of the dominant vegetation-landform features of the site district irrespective of their association with the physiographic regions. Reference to these physiographic regions is intended simply to allow the reader to orient and compare the sites selected according to the system proposed by Chapman and Putnam.

Topographic (NTS 1:50,000) and physiographic (Chapman and Putnam, 1972, 1:253,440) maps were used to estimate the percentage of Site District 6-8 within each physiographic region. Within each sector of the physiographic region in the site district, the areal frequency of the various vegetation-landform features were recorded. For each vegetation-landform feature, estimates of the percentage of the area remaining in a natural and undisturbed state were made and tabulated.

Features represented by Parks and those missing from the system were listed. Sections (ii) to (iv) of the Methodology outline the steps followed to document and select the best available examples of the dominant vegetation-landform features within the study area. Candidate nature reserves were chosen to represent the missing features identified through the natural features analysis. Table 2 tabulates the time spent on each step.

(ii) Review of Background Information

Existing information on file at the Ministry of Natural Resources, Central Region, Parks and Recreation Section was compiled according to physiographic regions and landforms, by P. Terpstra. This information is presented in Appendix C. The major source of information for this site district was the International Biological Program (IBP) survey sheets. Environmental Data Cards, Environmentally Sensitive Areas (ESA) reports and Ministry of Natural Resources Sensitive Areas files provided additional information.

TABLE 2: TIME ALLOCATION FOR NATURAL FEATURES ANALYSIS AND NATURE RESERVE SELECTION PROCEDURE FOR SITE DISTRICT 6-8

STEP	DAYS
1. Natural Feature Analysis (overview of natural landscape and identification of life science features not represented by Parks).	5
2. Review of Background Information (review of topographic maps, physiographic maps, airphotos and data; selection of sites for field checking).	4
3. Field Reconnaissance (by automobile and foot).	4
4. Site Evaluation (final review, comparison and evaluation of significant sites for candidate nature reserves; Environmental Data Card preparation and mapping).	6

Following the review of topographic and physiographic maps and the background data, representative life science sites with nature reserve potential were selected for detailed airphoto analysis. Where no information was available, sites were selected strictly from maps. The number of sites was reduced through airphoto analysis and a list was prepared for field investigation.

The following five criteria formed the basis for all phases of site selection and evaluation. Sites illustrating similar features were compared in terms of representation, diversity, condition, ecological considerations and special features.

(a) Representation - Representation of the remaining natural features of the site district was of primary importance. The dominant vegetation-landform features of the site district were given special emphasis.

(b) Diversity - Diversity was appraised in terms of the number and range of vegetation-landform features or habitats found within a site. The representation value of a site usually increases in proportion to the diversity of habitats contained within the site.

(c) Conditions - The degree of past disturbance to the main feature(s) of the site was assessed. Logging, grazing, fire, drainage, flooding, mining, housing developments, transportation and utility corridors and recreation were some of the impacts that were considered. Because all of southern Ontario has been effected by human disturbance to varying degrees, none of the sites selected are pristine.

(d) Ecological Considerations - Ecological considerations such as size, shape, buffering for adjacent land use and watershed location were also weighed. Generally, larger sites, which would be more likely to maintain stable and diverse natural communities, were chosen over smaller sites. However, for certain life science features only small remnant sites are left, especially in the extreme southern part of Ontario (Site Region 7). In such cases, sites that were close together or linked were ranked higher than widely spaced, small areas. Recent work on island biogeography (Diamond, 1975) suggests that species extinctions are less likely to occur in larger sites, linked sites or closely spaced sites than in small, isolated sites. Headwater areas and watershed units where some degree of control over inputs would be possible were given special attention.

(e) Special Features - Allowance was also made for special features such as the presence of rare and endangered species, species of phytogeographical interest (significant species), nesting sites for colonial birds such as heronries, and concentrations of breeding and/or migratory waterfowl. The special features criterion was of secondary importance; it was applied only after representation, diversity, condition and ecological considerations had been assessed. Because detailed and complete biological data was lacking for most sites, caution was exercised in comparing the special features of sites with different levels of background data.

(iii) Field Reconnaissance

During the compilation of natural areas information for this site district, a total of four days, June 23-25, and July 4, 1980 were spent field checking Site District 6-8; the study team consisted of the author, and field assistant, P. Terpstra. The area was travelled by automobile and

to a lesser extent by foot. To gain a better understanding and appreciation of the general nature and features of this landscape, a pre-selected route was travelled on the first day through the site district. The remaining three days consisted of field checking 26 pre-selected sites. Due to time constraints, an additional 10 sites were checked solely by airphoto interpretation and existing background information. Each site was investigated for one half to two hours and included an examination of as many different biological communities and site types as time permitted. General topography, soil types, site drainage, vegetation communities, fauna, condition, surrounding landscape features and land use were noted and recorded.

(iv) Site Evaluation

Following field reconnaissance, each site was reviewed, compared and evaluated within its vegetation-landform unit. Poor quality sites were deleted and the remainder were denoted as significant sites (see Glossary).

Following further evaluation, candidate nature reserves (see Glossary) were selected from the list of significant sites. Representation, diversity, condition, and ecological considerations were weighted equally in the evaluation procedure while special features were considered less important. A further analysis of candidate nature reserves led to the identification of the best quality sites to represent each dominant vegetation-landform type. Environmental Data Cards were prepared for each significant site and one page nature reserve checksheets for each candidate site (Appendix A). Location and boundaries of each significant site and candidate nature reserve were mapped on 1:50,000 topographic maps and all data were placed on file at the Ministry of Natural Resources, Central Region, Parks and Recreation Section.

Note that ownership was generally not considered during the evaluation process. Exceptions were Indian Reserve and Department of National Defense lands which are outlined on the 1:50,000 topographic maps. Significant sites on these federally-controlled lands were not recommended as candidate nature reserves, even if they contained the best quality or only example of a major vegetation-landform feature in the site district. The reason for this exception was that these federal lands were considered to be outside of provincial control.

The preparation of this report involved the compilation of existing data on the natural areas of Site District 6-8. This data included available information on Environmentally Sensitive Areas in the site district, airphoto review, topographic map review, and some contact with individuals knowledgeable about the site district. A limited amount of time was devoted to field checking of sites in order to assess their current condition and the degree of representation offered by each.

The emphasis of this study was directed towards vegetation-landform features. Therefore, areas of high quality wildlife and fisheries habitat, and special sites such as concentrations of rare or endangered flora and fauna, are generally missing unless otherwise a component of a representative vegetation-landform feature.

3. CANDIDATE NATURE RESERVES

The preliminary overview process identified five dominant vegetation-landform features remaining in a relatively natural undisturbed state. The five types include drumlins, post-glacial shorelines, marshes, bogs and swamps. An additional drumlinoidal hill type primarily composed of upland sites was identified. However, suitable sites were not available to represent this feature due to a lack of undisturbed areas. Between upland drumlins, a number of lowland wetlands were available, however, during the overview process, similar, more extensive and less disturbed sites were identified as part of the lake/river wetland systems. Additionally two small relict prairie communities are known from the sandplains of the Simcoe Lowlands. Due to their restricted distribution in the site district, they were not considered a major vegetation-landform feature to be represented. These two prairie sites are recommended for further investigation and evaluation. Appendix B presents a summary of the available information for these areas.

Table 1 summarizes the natural features analysis and nature reserve selection procedure according to physiographic region and vegetation-landform feature. The results of the analysis are presented in the final column entitled Candidate Nature Reserves Selected to Represent the Missing Features. Of the thirty-six areas initially selected, twenty-two were chosen as significant sites and of these, seven as candidate nature reserves (Table 3). The locations of these seven candidate nature reserves are shown on Figure 2. Of the seven candidate nature reserves selected, five offer the best representation of the dominant features. The largest marshland complex is Scugog Marsh, which supports regionally significant waterfowl breeding and migratory habitat. Harris Island Park Reserve and Proposed Marshland/ Drumlin Island Addition, a highly diverse marshland-drumlin island complex which includes open water, marsh and swamp types, provides an excellent example of wetland succession; the forested drumlins are undisturbed. The best broad river valley system swamp is Emily River, an extensive, relatively undisturbed and highly diverse wetland site. Goose Lake Wetlands offer the best undisturbed example of a swamp and contains open water, marsh, bog and swamp types. Finally the Allandale Lake Algonquin Bluff is the least disturbed shoreline feature containing a moderate diversity of upland forest types.

The other two candidate sites selected are the Holland River Marsh and Cavan Bog. Like Scugog Marsh, Holland River Marsh is an extensive, disturbed wetland providing regionally significant waterfowl breeding and migratory habitat with a good variety of vegetation types. Based on its highly diverse and undisturbed nature, the best known example of a small peatland bog in 6-8 is Cavan Bog. Somewhat similar vegetation types are found within the Goose Lake Wetlands and Emily River Swamp. In addition, Cavan Bog contains a high diversity of orchid species, some regionally significant.

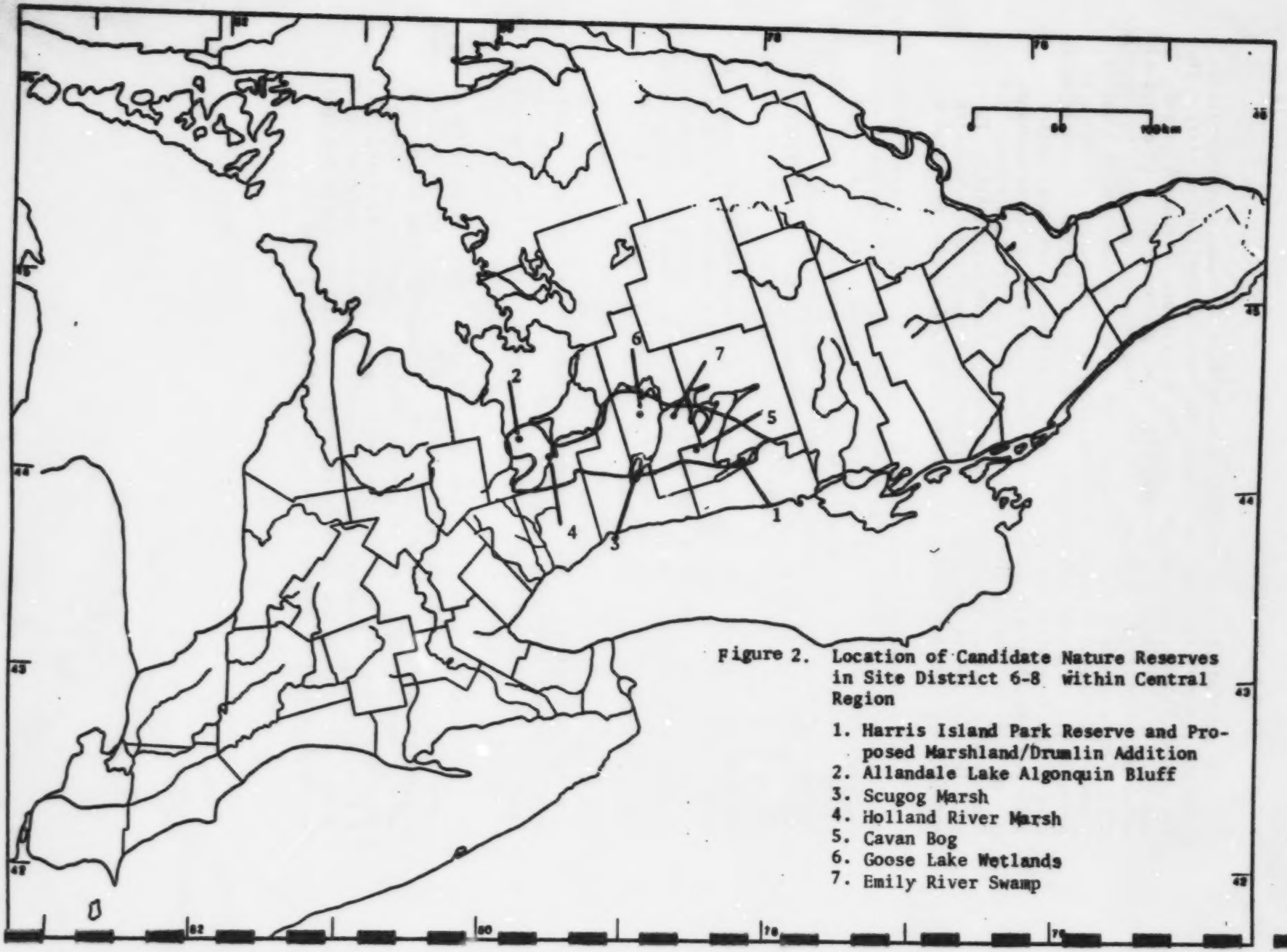


Figure 2. Location of Candidate Nature Reserves in Site District 6-8 within Central Region

1. Harris Island Park Reserve and Proposed Marshland/Drumlin Addition
2. Allandale Lake Algonquin Bluff
3. Scugog Marsh
4. Holland River Marsh
5. Cavan Bog
6. Goose Lake Wetlands
7. Emily River Swamp

TABLE 3: LIST OF SIGNIFICANT SITES AND CANDIDATE NATURE RESERVES IN SITE DISTRICT 6-8 WITHIN CENTRAL REGION

VEGETATION-LANDFORM FEATURE AND PHYSIOGRAPHIC REGION	SIGNIFICANT SITE	CANDIDATE NATURE RESERVE
UPLANDS		
Drumlin		
Peterborough Drumlin Field - drumlinized till plain	Harris Island Park Reserve and Proposed Marshland - Drumlin Island Addition (31D/1 265973, 250970) Morrow Bay Woods (31D/8 365045) Westwood Drumlin (31D/8 330120)	Harris Island Park Reserve and Proposed Marshland - Drumlin Island Addition (31D/1 265973, 250970)
Post-glacial Shoreline		
Simcoe Lowlands - sandplain	Allandale Lake Algonquin Bluffs (31D/5 010100)	Allandale Lake Algonquin Bluffs (31D/5 010100)
WETLANDS		
Marsh		
Peterborough Drumlin Field - muck	Harris Island Park Reserve and Proposed Marshland - Drumlin Island Addition (31D/1 265973, 250970) Indian River Marsh (31D/1 010280) Pigeon Lake Marsh (31D/7 970150) (31D/7 960110)	Harris Island Park Reserve and Proposed Marshland - Drumlin Island Addition (31D/1 265973, 250970)
Peterborough Drumlin Field - spillway	Birdsalls Point Marsh (31D/8 335055) Ouse River Marsh (31D/8 360060)	
Schomberg Clay Plain - clay	Scugog Marsh (31D/2 670830) Valentia Marsh (31D/2 720000)	Scugog Marsh (31D/2 670830)
Simcoe Lowlands - muck	Holland River Marsh (31D/4E 180940) (31D/3 210910)	Holland River Marsh (31D/4 180940)
Bog		
Peterborough Drumlin Field - muck	Wilfred Bog (31D/6 490100) Cavan Bog (31D/8 055040)	Cavan Bog (31D/8 055040)

TABLE 3: LIST OF SIGNIFICANT SITES AND CANDIDATE NATURE RESERVES IN SITE DISTRICT 6-8 WITHIN CENTRAL REGION

VEGETATION-LANDFORM FEATURE AND PHYSIOGRAPHIC REGION	SIGNIFICANT	CANDIDATE NATURE RESERVE
Swamp		
Peterborough Drumlin Field - muck	Zephyr Creek Swamp(31D/6 390030) Goose Lake Wetlands (31D/7 700210) Martin Creek Swamp (31D/7 740260) Emily River Swamp (31D/7 925220) East Cross Creek Swamp (31D/7 820030) Pefferlaw Brook Swamp (31D/3 435950) Beaverton River Swamp (31D/3 540940)	Goose Lake Wetlands (31D/7 700210) Emily River Swamp (31D/7 925220)
Peterborough Drumlin Field - sandplain	Cavan Creek Wetlands - Kendry Woods (31D/1 050980) Cavan Creek Headwaters (31D/2 970960)	

4. CONCLUSIONS

A total of seven candidate nature reserves are recommended to represent the typical vegetation-landform features of Site District 6-8 within Central Region. They include a drumlin-marsh complex - Harris Island Park Reserve and Proposed Marshland/ Drumlin Island Addition, two marshes - Scugog and Holland River, two swamps - Goose Lake and Emily River, a bog - Cavan Bog and a sandplain post-glacial shoreline - Allandale Lake Algonquin Bluffs. Priority should be given to Harris Island Park Reserve and Proposed Addition, Scugog Marsh, Goose Lake Wetlands, Emily River Swamp and the Allandale Lake Algonquin Bluffs as they offer the best representation of the dominant features.

These candidate nature reserves require further research to determine the feasibility of their protection over the long term. Land-use designation of the site and surrounding land and other environmental factors (i.e., size of watershed, etc) effecting present and future stability should be assessed. Candidate nature reserves which can be feasibly managed in a stable condition over the long term, should either be directly acquired by public agencies such as the Ministry of Natural Resources, Conservation Authorities, the Nature Conservancy and/or individual naturalist clubs. Alternatively, the present owners should be encouraged to work cooperatively to protect and manage the area through private land agreements. The significant sites also are valuable ecological areas which should receive protection through district and municipal land-use planning.

With the exception of the limited examples noted for Harris Island, no other significant sites or candidate nature reserves were identified to represent the drumlinoid hill and drumlin field features of Site District 6-8. These types comprise a majority of the land area in 6-8 but due to their highly disturbed state, no suitable sites remain.

GLOSSARY

Areas of Natural and Scientific Interest (ANSI): ANSIs are areas of land and water containing natural landscapes or features which have been identified as having values related to protection, natural heritage, scientific study or education. ANSIs may vary in level of significance. The most significant of these, Candidate Nature Reserves in the site district reports, may contribute to the achievement of the Ministry's protection objective. Those which do not contribute to the provincial protection objective are referred to as Significant Sites in the site district report.

Candidate Nature Reserve: Candidate nature reserves are sites selected on a systematic basis to represent the natural features and landscapes of Ontario and to complement other protected zones in the provincial park system. Candidate nature reserves contain the best examples of the landform and vegetation features of each site district; features that may be of widespread or restricted occurrence within the site district. They are selected after comparison and evaluation of significant sites sharing similar features. Each candidate nature reserve possesses sufficient ecological integrity, buffering capacity and size that protection appears to be a viable management strategy.

Physiographic Region: Chapman and Putnam (1973) described and mapped fifty-two minor physiographic regions within southern Ontario. These physiographic regions are areas with recognizable local landform patterns. Map 1 outlines the physiographic regions that fall wholly or partially within the site district.

Significant Site: A site of at least regional significance and representative of the landform and vegetation features of the site district. Chosen after reviewing the background information available on sites of biological importance, airphoto analysis and field checking of selected areas. After final evaluation and comparison of similar significant sites, some were chosen as candidate nature reserves. However, all significant sites are recommended for protection through the land-use planning process.

Site District: A subdivision of a site region, with a characteristic pattern of physiographic features (Hills, 1959). Site districts are small scale map units that segregate substantial areas from each other on the basis of broad landform patterns. Refer to Figure 1.

Site Region: An area of land within which the response of the vegetation to the features of the landform follows a consistent pattern (Hills, 1959). Refer to Figure 1.

APPENDIX A: NATURE RESERVE CHECK-SHEETS AND ENVIRONMENTAL DATA CARDS FOR SIGNIFICANT SITES IN SITE DISTRICT 6-8 WITHIN CENTRAL REGION

	Page Number
UPLANDS	
Drumlin	
Harris Island Park Reserve and Proposed Marshland/Drumlin Island Addition (31D/1 265973)-CNR[1]	23
Westwood Drumlin (31D/8 330120)	25
Morrow Bay Woods (31D/8 365045)	25
Post-Glacial Shoreline	
Allandale Lake Algonquin Bluffs (31D/5 010100)-CNR	27
WETLANDS	
Marsh	
Harris Island Park Reserve and Proposed Marshland/Drumlin Island Addition (31D/1 265973)-CNR	31
Scugog Marsh (31D/2 670830)-CNR	33
Holland River Marsh (31D/4 180940)-CNR	35
Valentia Marsh (31D/2 720000)	37
Pigeon Lake Marsh (31D/7 985150)	38
Indian River Marsh (31D/1 280010)	38
Birdsall Point Marsh (31D/8 335055)	39
Ouse River Marsh (31D/8 360060)	39
Bog	
Cavan Bog (31D/8 055040)-CNR	41
Wilfred Bog (31D/6 490100)	43
Swamp	
Goose Lake Wetlands (31D/7 700210)-CNR	45
Emily River Swamp (31D/7 925220)-CNR	47
Zephyr Creek (Georgina) Swamp (31D/6 390030)	49
Pefferlaw Brook Swamp (31D/3 435950)	49
Beaverton River Swamp (31D/3 540940)	49
Martin Creek Swamp (31D/7 740260)	50
East Cross Creek Swamp (31D/7 820030)	50
Cavan Creek Headwaters (31D/2 970960)	51
Cavan Creek Wetlands - Kendry (31D/1 050980)	51

[1] CNR indicates a candidate nature reserve.

ONTARIO NATURE RESERVES PROGRAM – LIFE SCIENCE INVENTORY CHECK-SHEET

NAME	MAP NAME	MAP NUMBER	UTM REF.
Harris Island Park Reserve and Proposed Marshland/Drumlin Island Addition	Rice Lake	31D/1	265973

COUNTY, DISTRICT or REGIONAL MUNICIPALITY: Peterborough

LOCALITY: north shore of Rice Lake

TOWNSHIP / LOTS / CONCESSIONS:

AREA: 750 acres / 300 ha

OWNERSHIP:

ADMINISTRATION:

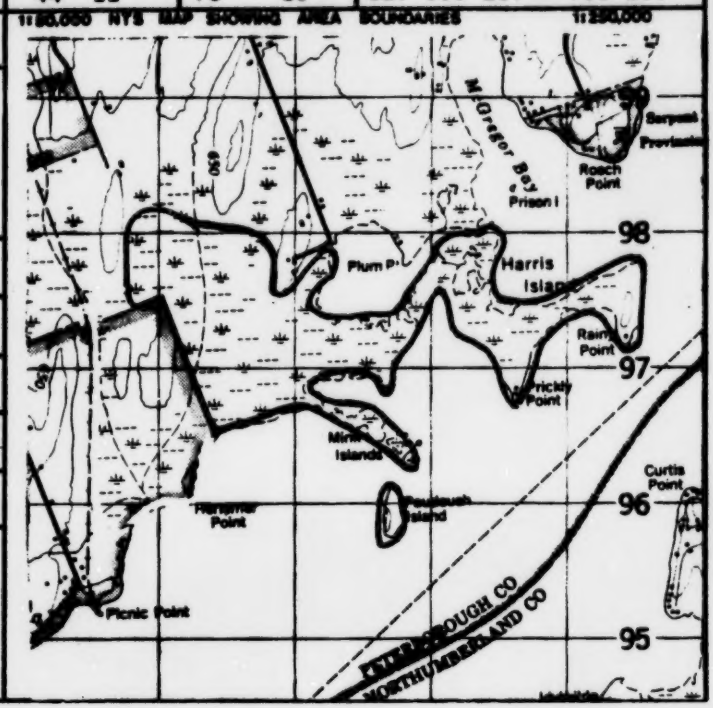
FOREST REGION AND DISTRICT	SITE REGION AND DISTRICT
L-1	6-8
MNR REGION AND DISTRICT	**CONSERVATION AUTHORITY**
Central-Lindsay	Otonabee

AERIAL PHOTOGRAPHS — BASE MAP: 442781

YEAR	ROLL	FLIGHT LINE	NUMBERS
1978	24	4413	133-136
1978	22	4414	137-140
1978	21	4415	165-167

LAT.	LONG.	ALT. MIN.	ALT. MAX.
44° 11'N	78° 10'W	ca. 650 ft.	700 ft.

1:50,000 NYS MAP SHOWING AREA BOUNDARIES 1:250,000



PHYSICAL AND BIOLOGICAL FEATURES

Situated on the north shore of Rice Lake, Harris Island Park Reserve is characterized by two small forested drumlin islands and adjoining marshland. The islands are vegetated with young to intermediate-aged forests of sugar maple - red oak - white ash - white pine- large-toothed aspen. Pondweed, open water marsh, cattail - sweet gale closed marsh and alder-cattail shrub swamp are the dominant wetland communities. Wild rice beds occur between the two islands. The proposed addition includes the Mink Islands Marshes and marshland adjacent to the east of Hiawatha Indian Reserve which support the following vegetation types: wild rice marsh, scrubby cattail marsh, alder-sweet gale scrub marsh, alder-silver maple swamp, tamarack-alder swamp and silver maple swamp. Paudaush Island is a small forested drumlin island adjacent to the main island.

Harris Island Park Reserve provides the best example of an undisturbed marsh-drumlin island complex typical of the Rice Lake area. The proposed addition of marshland and drumlin island enhance this area's diversity and regional significance. Paudaush Island is also a forested drumlin, a rare feature of the Peterborough Drumlin Field while the marshland demonstrates excellent vegetation zonation from open water to marsh to swamp.

DATA SHEETS ATTACHED

PHYSICAL DESCRIPTION	☐	SUMMARY SPECIES LISTS	☐
VEGETATION SUMMARY	☐	PHYSICAL FEATURES MAP	☐
EVALUATION SHEET	☐	VEGETATION MAP	☐
COMMUNITY DESCRS.	☐	BIBLIOGRAPHY	☐
COMMUNITY COMP. LISTS	☐	PHOTOGRAPHS	☐

MAJOR INFORMATION SOURCES

Cuddy, 1972; Hanna, 1980. Airphoto Interpretation; IBP, 1972.

EVALUATION AND PRIORITIES

Harris Island Park Reserve is the best example of an undisturbed marsh-drumlin island complex in Site District 6-8. The proposed addition would enhance the park reserve's diversity of marshland vegetation.

DATE COMPILED	COMPILER
October 29, 1980	R. Hanna

Ontario Ministry of Natural Resources, Division of Parks, Park Planning Branch, Queen's Park, Toronto, Ontario, M7A 1W3

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Westwood Drumlin	31D/8	330120

BRIEF DESCRIPTION

Fifty metre high forested drumlin, 1 km west of Westwood. Immature to semi-mature sugar maple upland forest; cedar lowland at base. Northeastern edge of drumlin is dissected by concession road and is farmed. Private home on drumlin's southeast slope. Active small gravel pit north of drumlin.

SOURCES

Hanna, 1980. Airphoto Interpretation.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
June 23, 1980 Hanna/Terpstra			Hanna, 1980

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR, WHITNEY BLOCK, QUEEN'S PARK, TORONTO, M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Morrow Bay Woods	31D/8	365045

BRIEF DESCRIPTION

Partially forested drumlin & drumlinoidal woods on the north shore of Rice Lake where narrows to form Trent River. Farmland on south side, shoreline cottage development on north side. Major vegetation types include immature to semi-mature deciduous upland, dense young upland forest and cedar lowland.

SOURCES

Hanna, 1980. Airphoto Interpretation.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
			Hanna, 1980

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR, WHITNEY BLOCK, QUEEN'S PARK, TORONTO, M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Harris Island Park Reserve & Proposed Marshland Addition	31D/1	265973

BRIEF DESCRIPTION

Two small forested drumlins and adjoining marshland (cattail swamp, sweet gale-cattail scrub and alder swamp) totalling 75 h (186 acres) comprise the Park Reserve. Wild rice beds between islands. Lies across from Serpent Mounds Provincial Park on north shore of Rice Lake. Proposed addition includes marshland adjacent to Hiawatha Indian Reserve and Mink Islands (cattail marsh, *Decodon verticillatus* marsh, silver maple-elm swamp, tamarack-cedar-alder scrub swamp, white pine-sugar maple-poplar mesic forest) and Paudash Island (forested drumlin). A candidate nature reserve.

SOURCES

Hanna, 1980. Airphoto Interpretation, IBP, 1972; Cuddy, 1977.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
June 23/80 Hanna/Terpstra		Hanna, 1980	Hanna/80

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR, WHITNEY BLOCK, QUEEN'S PARK, TORONTO, M7A 1W3

ONTARIO NATURE RESERVES PROGRAM – LIFE SCIENCE INVENTORY CHECK-SHEET

NAME	MAP NAME	MAP NUMBER	UTM REF.
Allandale Lake Algonquin Bluffs	Barrie	31D/5	010100

COUNTY, DISTRICT or REGIONAL MUNICIPALITY: Simcoe County

LAT.: 44 ° 20 'N | LONG.: 79 ° 44 'W | ALT. MIN.: ca. 775 ft. | ALT. MAX.: 1025 ft.

LOCALITY: southwest of Allandale

TOWNSHIP | LOTS | CONCESSIONS

AREA: 1315 acres | 530 ha

OWNERSHIP

ADMINISTRATION

FOREST REGION AND DISTRICT	SITE REGION AND DISTRICT
L-1	6-8
MNR REGION AND DISTRICT	CONSERVATION AUTHORITY
Central-Huronia	Nottawasaga

AERIAL PHOTOGRAPHS — BASE MAP: 443793

YEAR	ROLL	FLIGHT LINE	NUMBERS
1971	9	4414	18-22

PHYSICAL AND BIOLOGICAL FEATURES

Rising 70 m (225 feet) above the old Algonquin lake plain, the Allandale bluffs span a 6 km section of the post-glacial shoreline. The site is located 2 km southwest of Allandale. Immature to semi-mature red oak - sugar maple forest with beech, white pine, trembling aspen and ironwood characterize the uplands. The lower portions of the slope contain semi-mature to mature mesic hemlock - beech woods. A large abandoned gravel pit occurs in the east central portion of the bluff. The area is dissected by several concession roads.

The Allandale Lake Algonquin Bluffs offer the least disturbed and most diverse bluff complex in the site district.

DATA SHEETS ATTACHED

PHYSICAL DESCRIPTION	☐	SUMMARY SPECIES LISTS	☐
VEGETATION SUMMARY	☐	PHYSICAL FEATURES MAP	☐
EVALUATION SHEET	☐	VEGETATION MAP	☐
COMMUNITY DESCRS.	☐	BIBLIOGRAPHY	☐
COMMUNITY COMP. LISTS	☐	PHOTOGRAPHS	☐

MAJOR INFORMATION SOURCES

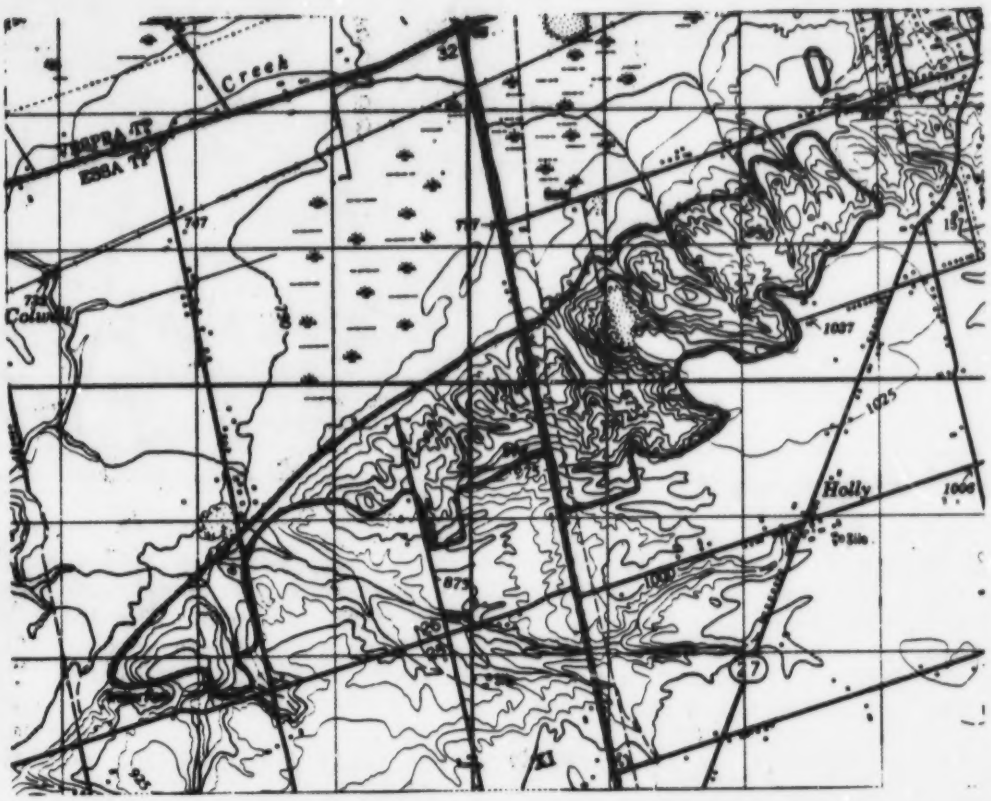
Hanna, 1980. Airphoto Interpretation.

EVALUATION AND PRIORITIES

The Allandale Lake Albonquin Bluffs are the least disturbed and most vegetatively diverse bluff complex in Site District 6-8.

DATE COMPILED	COMPILER
October 29, 1980	R. Hanna

Ontario Ministry of Natural Resources, Division of Parks, Park Planning Branch, Queen's Park, Toronto, Ontario, M7A 1W3


Creek
Holly

SITE DISTRICT 6-8: UPLANDS - Post-glacial Shoreline

EARTH	LIFE	NAME OF AREA	MAP SHEET	SITE REFERENCE
	X	Allandale Lake Algonquin Bluffs	31D/5	010100

This site represents 6 km of upland forest spanning a portion of the Lake Algonquin shoreline southwest of Allandale. Immature to semi-mature red oak - sugar maple with beech, ironwood, white pine, trembling aspen. Mature mesic hemlock - beech woodlot in western section. Large abandoned gravel pit in east central portion of bluff. Area is dissected by several concession roads.
A candidate nature reserve.

SOURCES

Hanna, 1980. Airphoto Interpretation.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPLETED
July 4, 1980 Hanna/Terpstra			Hanna, 1980

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR, WHITNEY BLOCK, QUEEN'S PARK, TORONTO, ONTARIO M7A 1W3

1981

ONTARIO NATURE RESERVES PROGRAM – LIFE SCIENCE INVENTORY CHECK-SHEET

NAME	MAP NAME	MAP NUMBER	UTM REF.
Harris Island Park Reserve and Proposed Marshland/Drumlin Island Addition	Rice Lake	31D/1	265973

COUNTY, DISTRICT or REGIONAL MUNICIPALITY: Peterborough

LAT.: 44° 11'N | LONG.: 78° 10'W | ALT. MIN. MAX.: ca. 650 ft. - 700 ft.

LOCALITY: north shore of Rice Lake

TOWNSHIP / LOTS / CONCESSIONS:

AREA: 750 acres 300 ha

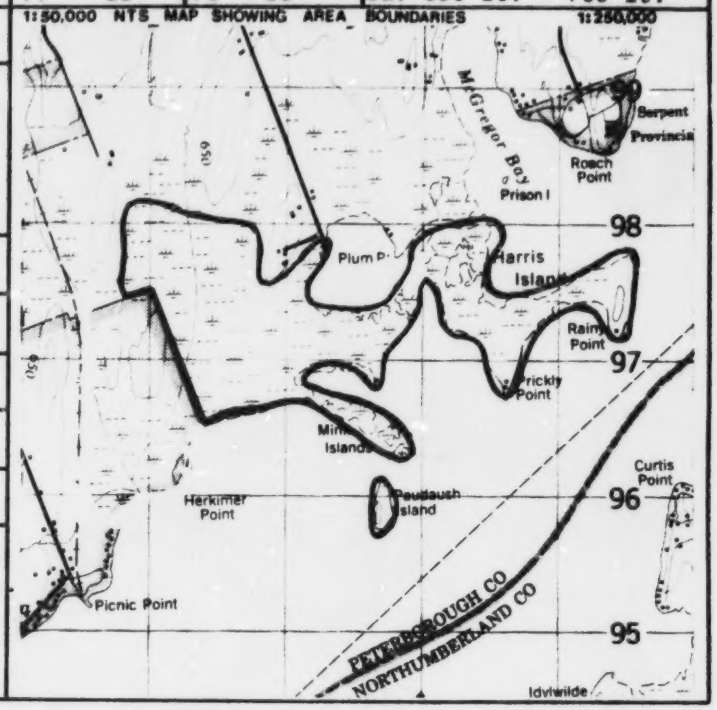
OWNERSHIP:

ADMINISTRATION:

FOREST REGION AND DISTRICT	SITE REGION AND DISTRICT
L-1	6-8
MNR REGION AND DISTRICT	**CONSERVATION AUTHORITY**
Central-Lindsay	Otonabee

AERIAL PHOTOGRAPHS — BASE MAP: 442781

YEAR	ROLL	FLIGHT LINE	NUMBERS
1978	24	4413	133-136
1978	22	4414	137-140
1978	21	4415	165-167



PHYSICAL AND BIOLOGICAL FEATURES

Situated on the north shore of Rice Lake, Harris Island Park Reserve is characterized by two small forested drumlin islands and adjoining marshland. The islands are vegetated with young to intermediate-aged forests of sugar maple - red oak - white ash - white pine - large-toothed aspen. Pondweed, open water marsh, cattail - sweet gale closed marsh and alder-cattail shrub swamp are the dominant wetland communities. Wild rice beds occur between the two islands. The proposed addition includes the Mink Island Marshes and marshland adjacent to the east of Hiawatha Indian Reserve which support the following vegetation types: wild rice marsh, scrubby cattail marsh, alder-sweet gale scrub marsh, alder-silver maple swamp, tamarack-alder swamp and silver maple swamp. Paudaush Island is a small forested drumlin island adjacent to the main island.

Harris Island Park Reserve provides the best example of an undisturbed marsh-drumlin island complex typical of the Rice Lake area. The proposed addition of marshland and drumlin island enhance this area's diversity and regional significance: Paudaush Island is also a forested drumlin, a rare feature of the Peterborough Drumlin Field while the marshland demonstrates excellent vegetation zonation from open water to marsh to swamp.

DATA SHEETS ATTACHED

PHYSICAL DESCRIPTION	☐	SUMMARY SPECIES LISTS	☐
VEGETATION SUMMARY	☐	PHYSICAL FEATURES MAP	☐
EVALUATION SHEET	☐	VEGETATION MAP	☐
COMMUNITY DESCRS.	☐	BIBLIOGRAPHY	☐
COMMUNITY COMP. LISTS	☐	PHOTOGRAPHS	☐

MAJOR INFORMATION SOURCES

Cuddy, 1972; Hanna, 1980. Airphoto Interpretation; IBP, 1972.

EVALUATION AND PRIORITIES

Harris Island Park Reserve is the best example of an undisturbed marsh-drumlin island complex in Site District 6-8. The proposed addition would enhance the park reserve's diversity of marshland vegetation.

DATE COMPILED	COMPILER
October 29, 1980	R. Hanna

Ontario Ministry of Natural Resources, Division of Parks, Park Planning Branch, Queen's Park, Toronto, Ontario, M7A 1W3

SITE DISTRICT 6-8: WETLANDS - Marsh

ONTARIO NATURE RESERVES PROGRAM – LIFE SCIENCE INVENTORY CHECK-SHEET

NAME	MAP NAME	MAP NUMBER	UTM REF.
Scugog Marsh (Osler Tract)	Scugog	31D/2	670830

COUNTY, DISTRICT or REGIONAL MUNICIPALITY: Durham

LOCALITY: south end of Lake Scugog

TOWNSHIP / LOTS / CONCESSIONS:

AREA: ca. 6670 acres approx. 2700 ha

OWNERSHIP:

ADMINISTRATION:

LAT.	LONG.	ALT. MIN.	ALT. MAX.
44 ° 05 'N	78 ° 55 'W	ca. 825 ft.	

FOREST REGION AND DISTRICT	SITE REGION AND DISTRICT
L.1	6-7/6-8
MNR REGION AND DISTRICT	**CONSERVATION AUTHORITY**
Central-Lindsay	Kawartha

AERIAL PHOTOGRAPHS — BASE MAP: 441784

YEAR	ROLL	FLIGHT LINE	NUMBERS
1971	27	4405	3-6
1971	29	4404	63-66
1971	55	4404	4-8
1971	24	4403	65-69

PHYSICAL AND BIOLOGICAL FEATURES

An extensive marsh complex, of more than 2700 ha, remains at the south end of Lake Scugog. Deep-water cattail marsh, stands of wild rice, cattail-sweet gale scrub, alder-willow-sweet gale-swamp birch scrub and open water sections make up the marsh complex. A tamarack-elm swamp, which approaches bog-like conditions in parts, edges the marsh. Mixed woodlands (cedar-birch-silver maple-aspen) and conifer plantations occur on the slopes around the basin. Because of its size and isolation, due to restricted public access, Scugog Marsh provides highly significant habitat for breeding and migratory waterfowl and species such as Common Loon, Osprey and Goshawk. Considerable data on the waterfowl and avifauna of this area has been collected, commencing in the early 1900's when Osler banded waterfowl in the marsh.

A series of access channels was dredged through the marsh about 30 years ago. Hwy 7A passes over a causeway that bisects the area.

Despite these disturbances, the Scugog Marsh was selected as a candidate nature reserve to represent a marsh complex based on its large size, its diversity and its significance as a breeding bird habitat. Scugog Marsh falls within two site districts, 6-7 and 6-8.

DATA SHEETS ATTACHED

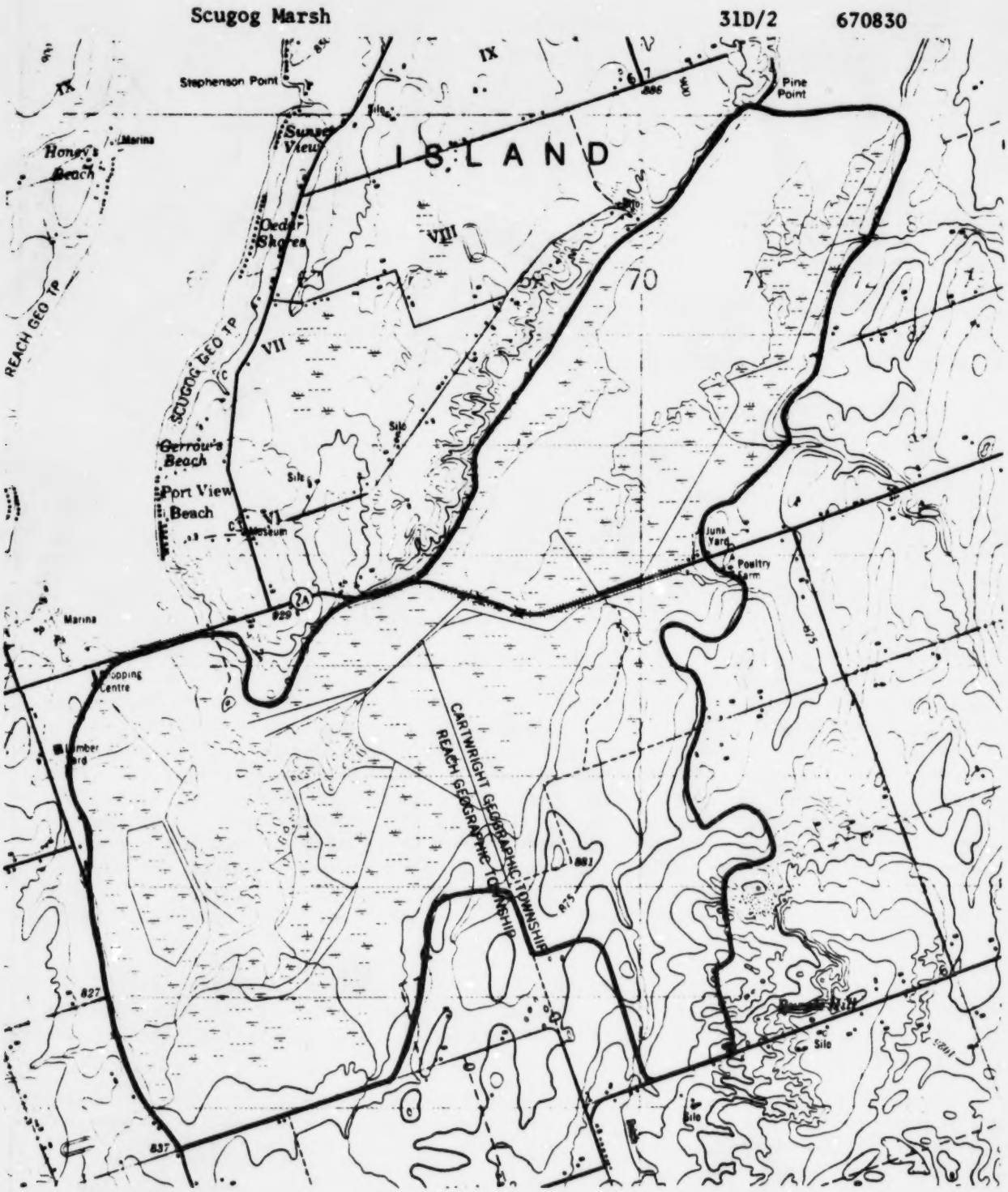
PHYSICAL DESCRIPTION	☐	SUMMARY SPECIES LISTS	☐
VEGETATION SUMMARY	☐	PHYSICAL FEATURES MAP	☐
EVALUATION SHEET	☐	VEGETATION MAP	☐
COMMUNITY DESCRS.	☐	BIBLIOGRAPHY	☐
COMMUNITY COMP. LISTS	☐	PHOTOGRAPHS	☐

MAJOR INFORMATION SOURCES: Hanna, 1980 Air Photo Interpretation; Lindsay, 1980-81, Air Photo Interpretation; Brief Field Visit, 17 July, 1980; Tozer and Richards, 1974; Tozer, 1971; Cuddy, 1977; Bobbette, 1975, Lindsay, 1974

EVALUATION AND PRIORITIES: A very extensive marsh complex. Highly significant for breeding and migratory waterfowl. North part in Site District 6-8.

DATE COMPILED	COMPILER
5 February 1981	K. M. Lindsay and R. Hanna

Ontario Ministry of Natural Resources, Division of Parks, Planning Branch, Queen's Park, Toronto, Ontario, M7A 1W3


Scugog Marsh
31D/2
670830
ISLAND
Stephenson Point
Pine Point
Honey's Beach
Marina
Sunset View
Cedar Shores
REACH GEO TP
SCUGOG GEO TP
Gerrou's Beach
Port View Beach
Junk Yard
Poultry Farm
Marina
Shopping Centre
Lumber Yard
CARTWRIGHT GEOGRAPHIC TOWNSHIP
REACH GEOGRAPHIC TOWNSHIP
Silo
70
75

SITE DISTRICT 6-8: WETLANDS - Marsh

ONTARIO NATURE RESERVES PROGRAM – LIFE SCIENCE INVENTORY CHECK-SHEET

NAME	MAP NAME	MAP NUMBER	UTM REF.
Holland River Marsh	Alliston/Newmarket	31D/4 - Also on 31D/3	180940

COUNTY, DISTRICT or REGIONAL MUNICIPALITY: Simcoe

LAT. 44° 11'N | LONG. 79° 31'W | ALT. MIN. ca. 725 ft. MAX.

LOCALITY: mouth of Holland River, Lake Simcoe

TOWNSHIP | LOTS | CONCESSIONS

AREA: 4300 acres 1750 ha

OWNERSHIP

ADMINISTRATION

FOREST REGION AND DISTRICT: L-1

SITE REGION AND DISTRICT: 6-8

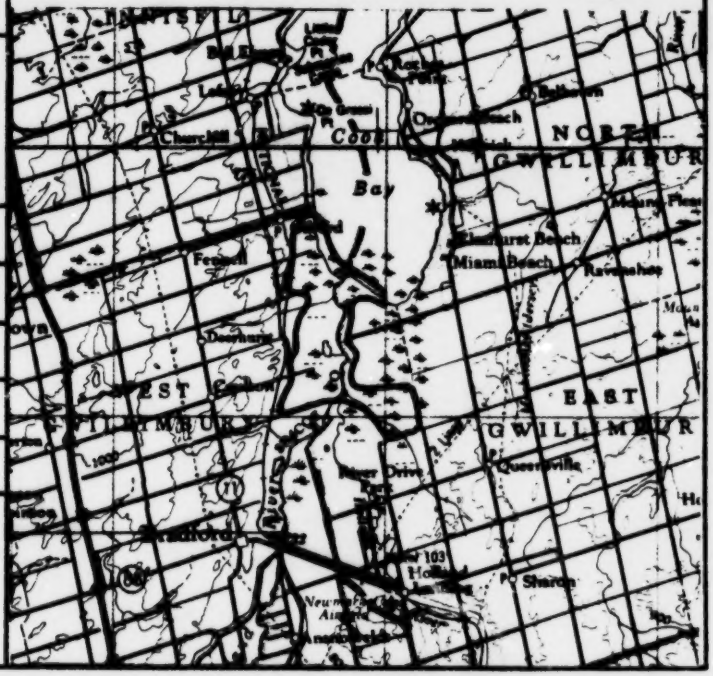
MNR REGION AND DISTRICT: Central- Maple

CONSERVATION AUTHORITY: South Lake Simcoe

AERIAL PHOTOGRAPHS — BASE MAP: 442792

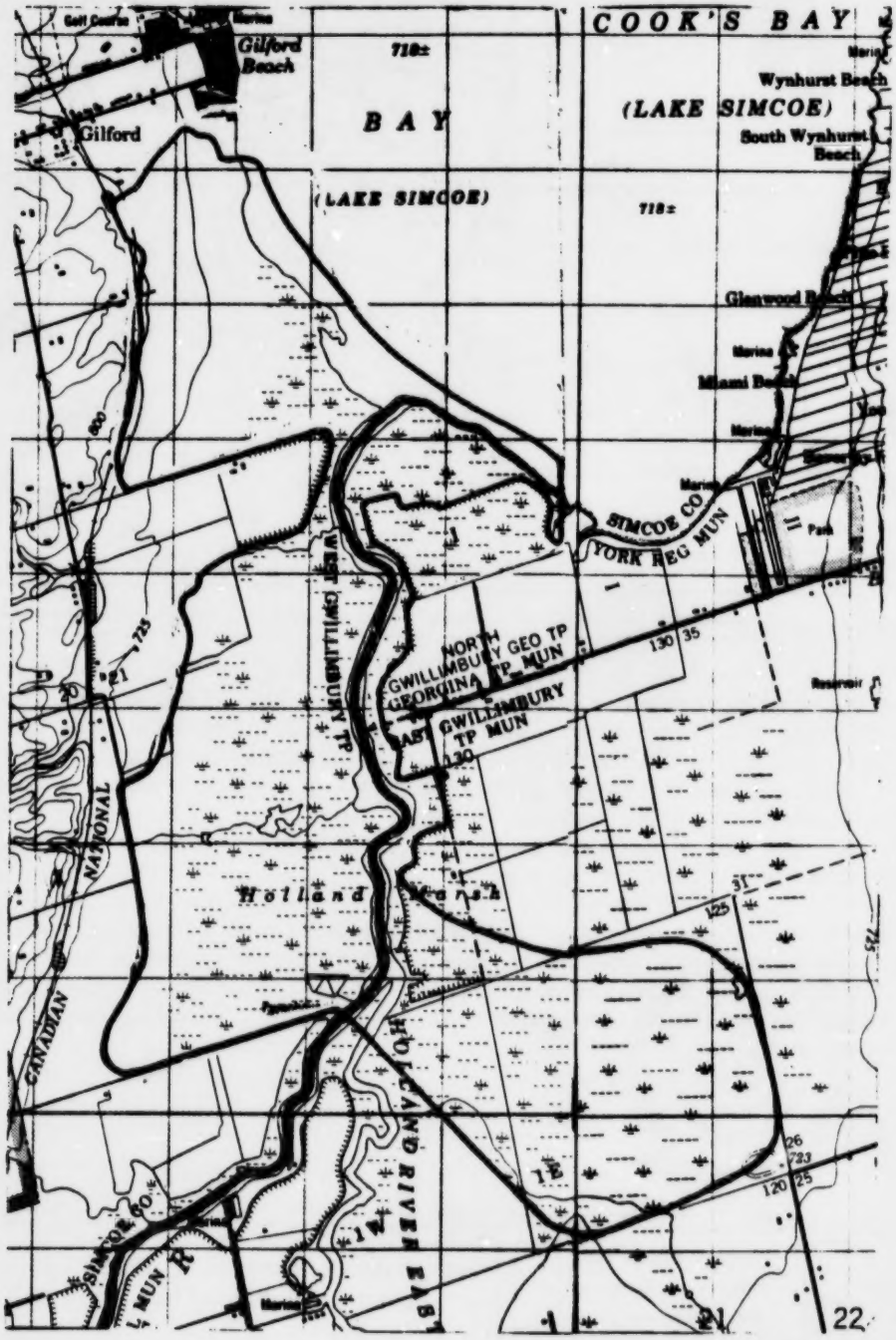
YEAR	ROLL	FLIGHT LINE	NUMBERS
1971	10	4409	28-30
1971	12	4408	32-36
1971	10	4407	62-66

1:50,000 NTS MAP SHOWING AREA BOUNDARIES 1:250,000


Cook Bay
Cook
Bay
Penetanguishene
Midland
Waubaushene
Victoria Harbour
Port Severn
Orillia
Lake Couchiching
Barrie
Innisfil
Lake Simcoe
Holland Landing
Bradford
Newmarket
Aurora
Queensville
Sharon
Keswick
Jackson's Point
Sutton West
Pefferlaw
Beaverton
Georgina Island
Fox Islands
Snake Island
Big Bluff
Big Chute
Gamebridge
Port Bolster
Port Elmhurst
Miami Beach
Ravenshoe
Mapleview
Mapleview Plaza
Lakeshore Park
Lakeshore Beach
Port Bellaire
Port Keewatin
Church Hill
Ramara
Orillia Beach
Big Bay Point
Big Bay
Big Bay Creek
Big Creek
Big Creek Marsh
Big Creek Swamp
Big Creek Provincial Park
Big Creek Provincial Park Campground
Big Creek Provincial Park Day Use Area
Big Creek Provincial Park Boat Launch
Big Creek Provincial Park Beach
Big Creek Provincial Park Trail
Big Creek Provincial Park Trailhead
Big Creek Provincial Park Parking Lot
Big Creek Provincial Park Picnic Area
Big Creek Provincial Park Playground
Big Creek Provincial Park Shelter
Big Creek Provincial Park Washroom
Big Creek Provincial Park Water Fountain
Big Creek Provincial Park Information Kiosk
Big Creek Provincial Park Entrance
Big Creek Provincial Park Exit
Big Creek Provincial Park Boundary
Big Creek Provincial Park Road

Holland River Marsh

31D/4 180940
Also on 31D/3



SITE DISTRICT 6-8: WETLANDS - Marsh

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Holland River Marsh	31D/4 Also on 31D/3	180940

BRIEF DESCRIPTION

Majority of extensive Holland River-Cook's Bay mouth flats have been reclaimed for vegetable farming. Remaining natural areas at mouth and upstream 5 km include extensive blue-joint grass-cattail marsh, aspen-cedar-willow swamp and peatland *Carex lasiocarpa, C. livida* marsh sweet gale-leatherleaf-*Betula pumila* tamarack shrub fen. Significant waterfowl habitat. Part of marsh near rivermouth is a Provincial Wildlife Area. A candidate nature reserve.

SOURCES Hanna, 1980. Airphoto Interpretation; Cuddy, 1977; Bobbette, 1976.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
June 23, 1980 Hanna/Terpstra			Hanna, 1980

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK, QUEEN'S PARK, TORONTO, M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Scugog Marsh	31D/2	670830

BRIEF DESCRIPTION

Extensive deep water cattail marsh, cattail sweet gale scrub, alder-willow-sweet gale thickets and tamarack-elm-ash swamp/bog complex in southern Lake Scugog. Significant breeding and migratory waterfowl habitat. The southern section is disturbed by a system of man-made channels south of Hwy. 7A which bissects the area. The concession roads built prior to flooding remain as channels through the marsh. A candidate nature reserve.

SOURCES Hanna, 1980. Airphoto Interpretation; Cuddy, 1977; Tozer and Richards, 1974.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
June 23, 1980 Hanna/Terpstra			Hanna, 1980

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK, QUEEN'S PARK, TORONTO, M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Valentia Marsh	31D/2	720000

BRIEF DESCRIPTION

Large marsh-swamp complex situated in a bay on the north shore of Lake Scugog. The major vegetation types are pondweed open water marsh, cattail marsh, cedar-alder scrub swamp, elm-balsam poplar-ash and cedar-balsam poplar-ash swamps. Valentia Marsh is the least disturbed marsh complex remaining in Lake Scugog. It is typical of the Lake Scugog area and high in plant diversity, demonstrating a transition from open water to marsh to swamp.

SOURCES Cuddy, 1977; Hanna, 1980. Airphoto Interpretation; IBP, 1972.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
Oct. 29/80 Hanna/Terpstra			Hanna, 1980

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK, QUEEN'S PARK, TORONTO, M7A 1W3

1981

SITE DISTRICT 6-8: WETLANDS - Marsh

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Pigeon Lake Marsh	31D/7	985150

Also on 31D/3

BRIEF DESCRIPTION

Extensive cattail marsh along southwestern and west shore of Pigeon Lake. Narrow band of marsh parallel to shore dredged by cottagers on south shore.

SOURCES Hanna, 1980. Airphoto Interpretation; Cuddy, 1977; Bobbette, 1976.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
June 24, 1980 Hanna/Terpstra			Hanna, 1980

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK, QUEEN'S PARK, TORONTO, M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Harris Island Park Reserve and Proposed Marshland/Drumlin Island Addition	31D/3	265973

BRIEF DESCRIPTION

Two small, forested drumlins and adjoining marshland (cattail swamp, sweet gale-cattail scrub and alder swamp) totalling 75 ha (186 acres) comprise the Park Reserve. Wild rice beds between islands. Lies across from Serpent Mounds Provincial Park on north shore of Rice Lake. Proposed addition includes marshland adjacent to Hiawatha Indian Reserve and Mink Islands (cattail marsh, *Decodon verticillatus* marsh, silver maple-elm swamp, tamarack-cedar-alder scrub swamp, white pine-sugar maple-poplar mesic forest) and Paudaush Island (forested drumlin). A candidate nature reserve.

SOURCES Hanna, 1980. Airphoto Interpretation; IBP, 1972; Cuddy, 1977.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
June 23, 1980 Hanna/Terpstra		Hanna, 1980	Hanna, 1980

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK, QUEEN'S PARK, TORONTO, M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Indian River Marsh	31D/1	280010

BRIEF DESCRIPTION

Extensive 275 ha (639 acre) marsh and swamp complex at mouth of Indian River on north shore of Rice Lake. Wild rice beds, cattail marsh, sweet gale-alder scrub carr, tamarack-alder and silver maple swamp. Breeding and migratory waterfowl habitat. Downstream of the town of Keene.

SOURCES Hanna, 1980. Airphoto Interpretation; IBP, 1972; Cuddy, 1977.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
June 23, 1980 Hanna/Terpstra			Hanna, 1980

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK, QUEEN'S PARK, TORONTO, M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Birdsall Point Marsh	31D/8	335055

BRIEF DESCRIPTION

At the mouth of small stream on north shore of Rice Lake is found a mixture of willow scrub, cattail-bulrush marsh and dogwood-sweet gale thickets. Many small channels and pools of open water and migrating waterfowl. Bissected by concession road.

SOURCES

Hanna, 1980. Airphoto Interpretation; Cuddy, 1977.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
June 23, 1980 Hanna/Terpstra			Hanna, 1980

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK QUEEN'S PARK TORONTO M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Ouse River Marsh	31D/8	360060

BRIEF DESCRIPTION

Extensive 240 ha (558 acres) marshland and swamp forest at mouth of Ouse River at east end of Rice Lake, surrounding intensively developed large drumlin. Bulrush, cattail and *Decodon verticillatus* marsh types; alder-dogwood-sweet gale scrub; cedar-silver maple swamp; white birch-sugar maple-basswood upland forest.

SOURCES

Hanna, 1980. Airphoto Interpretation; Cuddy, 1977; IBP, 1972.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
June 23, 1980 Hanna/Terpstra			Hanna, 1980

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK QUEEN'S PARK TORONTO M7A 1W3

1981

ONTARIO NATURE RESERVES PROGRAM - LIFE SCIENCE INVENTORY CHECK-SHEET

NAME	MAP NAME	MAP NUMBER	UTM REF.
Cavan Bog	Peterborough	31D/8	055040

COUNTY, DISTRICT or REGIONAL MUNICIPALITY	LAT.	LONG.	ALT. MIN. MAX.
Durham	44 ° 31'N	78 ° 26'W	ca. 800 ft.

LOCALITY: 3km west of Peterborough

TOWNSHIP / LOTS / CONCESSIONS:

AREA: 100 acres 40.5 ha

OWNERSHIP:

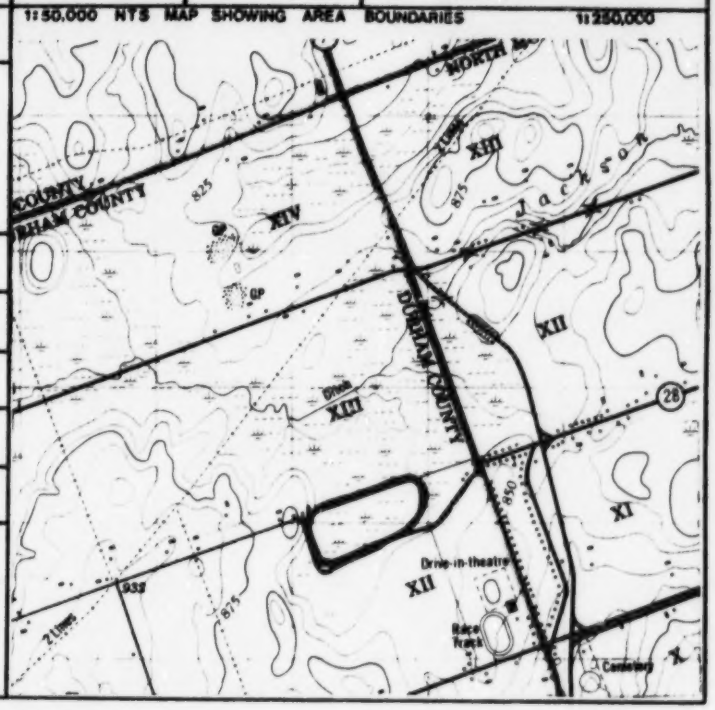
ADMINISTRATION:

FOREST REGION AND DISTRICT	SITE REGION AND DISTRICT
L-1	6-8
MNR REGION AND DISTRICT	**CONSERVATION AUTHORITY**
Central-Lindsay	Otonabee

AERIAL PHOTOGRAPHS — BASE MAP: 443782

YEAR	ROLL	FLIGHT LINE	NUMBERS
1971	23	4411	59-60

1:50,000 NTS MAP SHOWING AREA BOUNDARIES 1:250,000



PHYSICAL AND BIOLOGICAL FEATURES

Cavan Bog lies in the eastern arm of the highly disturbed Cavan Swamp - Jackson Creek complex. The bog is surrounded by a concession road, fields and an upland woodlot on its west and south sides. The centre is an open floating *Sphaghnum* bog mat surrounded by dwarf birch (*Betula glandulosa*) - bog rosemary (*Andromeda glaucophylla*) - shrubby cinquefoil (*Potentilla fruticosa*) and closed tamarack - spruce - cedar bog fringe. This is succeeded by a cedar-black spruce-tamarack-ash treed bog and balsam poplar-cedar-ash swamp. It contains a high diversity of orchid species (15), two of which are regionally significant - arethusa (*Arethusa bulbosa*) and small round-leaved orchid (*Orchis rotundifolia*). The far western portion is owned by the Otonabee Region Conservation Authority.

This is the best example, know to the author, of a small peatland bog in Site District 6-8. Cavan Bog is undisturbed and highly diverse. Wilfrid Bog (31D/6 490100), another significant bog in the site district, has been highly disturbed by the initiation of a peat mining operation.

DATA SHEETS ATTACHED

PHYSICAL DESCRIPTION	☐	SUMMARY SPECIES LISTS	☐
VEGETATION SUMMARY	☐	PHYSICAL FEATURES MAP	☐
EVALUATION SHEET	☐	VEGETATION MAP	☐
COMMUNITY DESCRS.	☐	BIBLIOGRAPHY	☐
COMMUNITY COMP. LISTS	☐	PHOTOGRAPHS	☐

MAJOR INFORMATION SOURCES

Cavan Township ESA, 1979; Hanna, 1980.
Airphoto Interpretation; IBP, 1972.

EVALUATION AND PRIORITIES

A relatively undisturbed and highly diverse bog site, Cavan Bog was considered the best known example of a small peatland bog in Site District 6-8.

DATE COMPILED	COMPILER
October 31, 1980	R. Hanna

Ontario Ministry of Natural Resources, Division of Parks, Park Planning Branch, Queen's Park, Toronto, Ontario, M7A 1W3

	X	Wilfred Bog	31D/6	490100

Mature, rich 41 h (112 acre) kettle-hole *Sphaghnum* bog lying 3 km east of Wilfred. Mainly tamarack-black spruce-white pine-leatherleaf-labrador tea-bog in preparation for mining. Bog on north side of road is actively mined by private landowner.

Hanna, 1980. Airphoto Interpretation; IBP, 1972.

June 24, 1980 Hanna/Terpstra			Hanna, 1980

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK, QUEEN'S PARK, TORONTO, ONTA. 1M3

	X	Cavan Bog	31D/8	055040

Small 40 h (100 acre) peatland bog 5 km southwest of Peterborough. Open to closed treed bog (tamarch-black spruce-cedar) and open shrub bog (*Betula glandulosa, Andromeda glaucophylla, Potentilla fructicosa, Eriophorum* sp.). Part of a large swamp complex consisting of disturbed carr and scrub swamp. West and south sides surrounded by a concession road, fields and upland woodlot. A candidate nature reserve.

Cavan Twp. ESA, 1979; Hanna, 1980. Airphoto Interpretation; IBP, 1972.

June 23, 1980 Hanna/Terpstra			Hanna, 1980

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR, WHITNEY BLOCK, QUEEN'S PARK, TORONTO, ONTA. 1M3

ONTARIO NATURE RESERVES PROGRAM – LIFE SCIENCE INVENTORY CHECK-SHEET

NAME	MAP NAME	MAP NUMBER	UTM REF.
Goose Lake Wetlands	Lindsay	31D/7	700210

COUNTY, DISTRICT or REGIONAL MUNICIPALITY: Victoria

LAT.: 44° 26' N | LONG.: 78° 52' W | ALT. MIN. MAX.: ca. 925 ft.

LOCALITY: 10km northwest of Lindsay

TOWNSHIP / LOTS / CONCESSIONS:

AREA: 1441 acres 583 ha

OWNERSHIP:

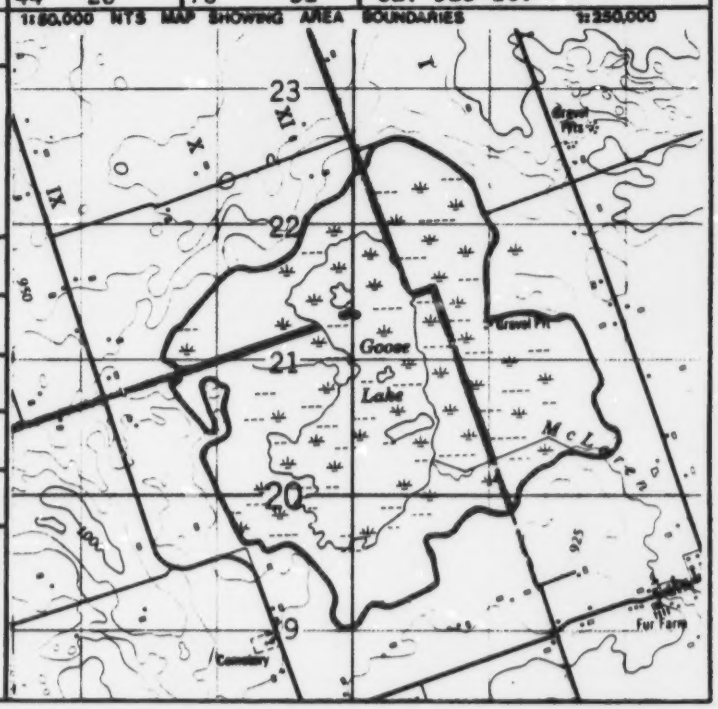
ADMINISTRATION:

FOREST REGION AND DISTRICT	SITE REGION AND DISTRICT
L-1	6-8
MNR REGION AND DISTRICT	**CONSERVATION AUTHORITY**
Central-Lindsay	Kawartha

AERIAL PHOTOGRAPHS — BASE MAP:

YEAR	ROLL	FLIGHT LINE	NUMBERS
1971	5	4418	70-73
1971	15	4417	59-61

1:50,000 NTS MAP SHOWING AREA BOUNDARIES 1:250,000



PHYSICAL AND BIOLOGICAL FEATURES

The Goose Lake Wetlands are an extensive shallow lake and wetland complex forming the headwaters of McLaren Creek. Situated 10 km northwest of Lindsay, it is completely surrounded by farmland with the exception of a concession road running adjacent to the northeast section. The main vegetation types are sugar maple - ash - beech upland forest, cedar - elm - white birch lowland forest, red maple - balsam poplar - black ash swamp, open tamarack - cedar - alder - sweet gale-(*Betula glandulosa*) swamp scrub, tamarack bog, sweet gale- leatherleaf bog, bog rosemary shrub bog, bog rosemary - bulrush bog fringe and shallow water aquatics. The drainage pattern has been modified by ditching the creek.

The relatively undisturbed, inaccessible and extensive character of Goose Lake Wetlands including a high diversity of representative vegetation types from open water through bog and swamp to upland forest, offers excellent nature reserve potential.

DATA SHEETS ATTACHED

PHYSICAL DESCRIPTION	☐	SUMMARY SPECIES LISTS	☐
VEGETATION SUMMARY	☐	PHYSICAL FEATURES MAP	☐
EVALUATION SHEET	☐	VEGETATION MAP	☐
COMMUNITY DESCRS.	☐	BIBLIOGRAPHY	☐
COMMUNITY COMP. LISTS	☐	PHOTOGRAPHS	☐

MAJOR INFORMATION SOURCES

Cuddy, 1977; Hanna, 1980. Airphoto Interpretation; IBP, 1972.

EVALUATION AND PRIORITIES

Goose Lake Wetlands is one of the least disturbed, inaccessible, extensive and diverse swamps in Site District 6-8.

DATE COMPILED	COMPILER
October 31, 1980	R. Hanna

Ontario Ministry of Natural Resources, Division of Parks, Park Planning Branch, Queen's Park, Toronto, Ontario, M7A 1W3

ONTARIO NATURE RESERVES PROGRAM – LIFE SCIENCE INVENTORY CHECK-SHEET

NAME	MAP NAME	MAP NUMBER	UTM REF.
Emily River Swamp	Lindsay	31D/7	925220

COUNTY, DISTRICT or REGIONAL MUNICIPALITY: Victoria

LOCALITY: Emily Creek upstream from Sturgeon Lake

TOWNSHIP / LOTS / CONCESSIONS:

AREA: 3500 acres 1417 ha

OWNERSHIP:

ADMINISTRATION:

FOREST REGION AND DISTRICT	SITE REGION AND DISTRICT
L-1	6-8
MNR REGION AND DISTRICT	**CONSERVATION AUTHORITY**
Central-Lindsay	Kawartha

LAT. 44 ° 26 'N LONG. 78 ° 35 'W ALT. MIN. ca. 825 ft. MAX.

1:50,000 NTS MAP SHOWING AREA BOUNDARIES 1:250,000

AERIAL PHOTOGRAPHS — BASE MAP: 444783

YEAR	ROLL	FLIGHT LINE	NUMBERS
1971	14	4416	90-91
1971	76	4417	158-159
1971	5	4418	88-89
1971	54	4419	99-102
1971	47	4420	90-91

PHYSICAL AND BIOLOGICAL FEATURES

Emily River Swamp is an extensive wetland complex containing a lake and river system which flows into Sturgeon Lake. Wet semi-closed coniferous peatland swamp forest dominated by tamarack - cedar - black spruce - alder - labrador tea comprises a major portion of the site. Other prominent types include elm - ash - cedar swamp, balsam poplar - ash - cedar lowland forest, alder -sweet gale - cedar scrub, cattail marsh, aquatic vegetation and closed upland forest. Emily Lake is encircled by a floating bog fringe of leatherleaf with black spruce and tamarack. The extreme southeastern portions are dissected by concession roads one having been built by the Emily Hunt Club.

Based on its relatively inaccessible and undisturbed nature, large size and high diversity of wetland types typical of the site district, Emily River Swamp is recommended as a candidate nature reserve.

DATA SHEETS ATTACHED

PHYSICAL DESCRIPTION	☐	SUMMARY SPECIES LISTS	☐
VEGETATION SUMMARY	☐	PHYSICAL FEATURES MAP	☐
EVALUATION SHEET	☐	VEGETATION MAP	☐
COMMUNITY DESCRS.	☐	BIBLIOGRAPHY	☐
COMMUNITY COMP. LISTS	☐	PHOTOGRAPHS	☐

MAJOR INFORMATION SOURCES

Cuddy, 1977; Hanna, 1980. Airphoto Interpretation; IBP, 1972.

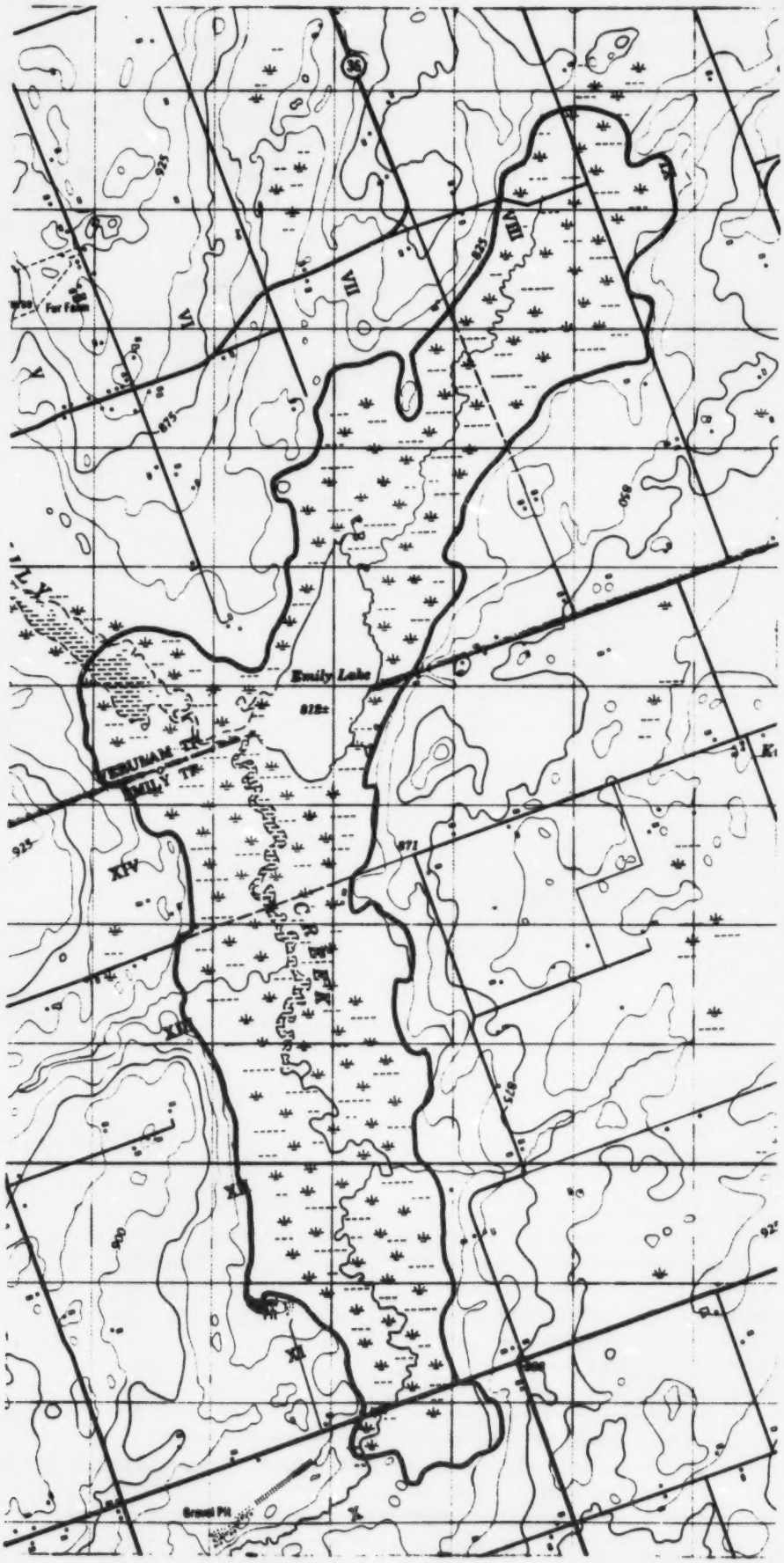
EVALUATION AND PRIORITIES

Emily River Swamp is one of the least disturbed, inaccessible, extensive and diverse swamps in Site District 6-8.

DATE COMPILED	COMPILER
October 31, 1980	R. Hanna

Ontario Ministry of Natural Resources, Division of Parks, Park Planning Branch, Queen's Park, Toronto, Ontario, M7A 1W3

Emily River Swamp 31D/7 925220



SITE DISTRICT 6-8: WETLANDS - Swamp

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Zephyr Creek (Georgina) Swamp	31D/6	390030

BRIEF DESCRIPTION

River swamp complex lying 6 km south of Lake Simcoe, north of Zephyr. Vegetation is characterized by red maple - white birch - balsam poplar - balsam fir lowland forest with willow - alder thickets, alder - willow - cattail - ash scrub marsh and birch - poplar - tamarack - spruce scrub swamp. Dissected by concession roads and railway line. Disturbed by drainage modifications.

SOURCES

Hanna, 1980. Airphoto Interpretation.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
June 25, 1980 Hanna/Terpstra			Hanna, 1980

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK, QUEEN'S PARK, TORONTO, ONTA 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Pefferlaw Brook Swamp	31D/3	435950

BRIEF DESCRIPTION

Seven hundred hectares (1900 acres) of river swamp and lake complex along a portion of the Pefferlaw Brook & Mud Lake. Mud Lake is shallow and slowly filling in. Dense aquatic vegetation, sweet gale fringe, alder thickets, tamarack-spruce bog, cedar-birch-balsam fir lowland forest. Small area to northwest of Mud Lake was drained. River swamp system consists mainly of semi-open balsam fir - balsam poplar and cedar-tamarack-black spruce swamps. Dissected by several concession roads.

SOURCES

Hanna, 1980. Airphoto Interpretation; IBP, 1972

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
June 24, 1980 Hanna/Terpstra			Hanna, 1980

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK, QUEEN'S PARK, TORONTO, ONTA 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Beaverton River Swamp	31D/3	540940

BRIEF DESCRIPTION

Five hundred and ninety hectares (1455 acres) of river - swamp complex along Beaverton River valley just south of Blackwater. Main marsh scrub swamp and marsh types; cat-tail, alder-cattail, alder-tamarack, cedar-ash-alder. Some balsam fir-tamarack-white birch-black spruce swamp is present. North and south ends bound by concession roads.

SOURCES Hanna, 1980. Airphoto Interpretation; M.N.R. Sensitive Areas, 1972; IBP, 1972.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
June 24, 1980 Hanna/Terpstra			Hanna, 1980

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK, QUEEN'S PARK, TORONTO, ONTA 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Goose Lake Wetlands	31D/7	700210

BRIEF DESCRIPTION:
Small shallow lake and wetland (1417 h (3500 acres)) illustrating open water succession from open water to sweet gale - leatherleaf bog fringe, tamarack - alder scrub, red maple - balsam poplar - black ash scrub swamp, cedar - balsam fir - tamarack - spruce open swamp, cedar lowland and upland forest. No access. 10 km northwest of Lindsay. A candidate nature reserve.

SOURCES:
Cuddy, 1977; Hanna, 1980. Airphoto Interpretation; IBP, 1972

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
June 24, 1980 Hanna/Terpstra			Hanna, 1980

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK QUEEN'S PARK TORONTO, ONTA 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Martin Creek Swamp	31D/7	740260

BRIEF DESCRIPTION:
One thousand, one hundred hectare (2740 acre) river swamp complex along Martin Creek, 5 km west of Sturgeon Lake. Mainly wet closed deciduous swamp forest of tamarack - balsam poplar - white birch. Other types include open dogwood - alder swamp, ash - dogwood swamp, dry mesic cedar - balsam fir esker slope forest and cedar swamp. Dissected by concession roads. Esker farmed/mined.

SOURCES:
Cuddy, 1977; Hanna, 1980. Airphoto Interpretation; IBP, 1972

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
June 25, 1980 Hanna/Terpstra			Hanna, 1980

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK, QUEEN'S PARK, TORONTO, ONTA 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	East Cross Creek Swamp	31D/7	820030

BRIEF DESCRIPTION:
Five hundred and eight-three hectares (1022 acres) of river swamp complex along East Cross Creek from its mouth at the Scugog River. Transition from grass/sedge/to - riverside meadow to dense alder thicket with scattered tamarack to very wet open spruce, tamarack, birch, elm swamp. Lowlying deciduous drumlin in wetland complex. Dissected by several concession roads.

SOURCES:
Hanna, 1980. Airphoto Interpretation; IBP, 1972.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
June 24, 1980 Hanna/Terpstra			Hanna, 1980

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK QUEEN'S PARK TORONTO, ONTA 1W3

1981

SITE DISTRICT 6-8: WETLANDS - Swamp

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Emily River Swamp	31D/7	925220

BRIEF DESCRIPTION:
One thousand and seventeen hectares (3500 acres) of river marsh/swamp/bog and lake complex along Emily Creek and Emily Lake. Upstream from Sturgeon Lake. Tamarack-cedar-black spruce swamp, elm-ash-cedar swamp, cattail marsh, balsam poplar-ash-cedar lowland forest, alder-sweet gale scrub swamp, aquatic vegetation and upland forest. Emily Lake has floating bog fringe of leatherleaf-spruce-tamarack. Dissected by two concession roads, one recently built by Emily Hunt Club. A candidate nature reserve.

SOURCES: Cuddy, 1977; Hanna, 1980. Airphoto Interpretation; IBP, 1972

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
June 24, 1980 Hanna/Terpstra			Hanna, 1980

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR, WHITNEY BLOCK, QUEEN'S PARK, TORONTO, M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Cavan Creek Headwaters	31D/2	970960

BRIEF DESCRIPTION:
Primary headwaters (714 h (1765 acres)) of Cavan Creek. Open pond, cattail-alder-grasses marsh, alder-willow-cedar scrub swamp, cedar-hemlock-white birch-trembling aspen-cedar-white pine upland woodland. Good coldwater trout stream (brown trout). Disturbed by railway line, hydro corridor and numerous concession roads.

SOURCES: Cavan Twp., ESA, 1979; 1980. Airphoto Interpretation.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
-			Hanna, 1980

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ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR, WHITNEY BLOCK, QUEEN'S PARK, TORONTO, M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Cavan Creek Wetlands-Kendry	31D/1	050980

BRIEF DESCRIPTION:
Three hundred and fifty hectares (850 acres) of wetland complex along Cavan Creek east of the Town of Cavan. Large pond and marsh area in west section. Cattail marsh, willow-alder dogwood scrub swamp and wet mixed cedar-maple-white birch forest. Water regulated by large dam and spillway on pond. Numerous mud flats and small ponds along Cavan Creek in east end. Habitat for wading and shore birds and water-fowl. Disturbed by Highway 7, 2 concession roads and railway line.

SOURCES: Cavan Twp., ESA, 1979; Hanna, 1980. Airphoto Interpretation.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
-			Hanna, 1980

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR, WHITNEY BLOCK, QUEEN'S PARK, TORONTO, M7A 1W3

1981

APPENDIX B: SITES REQUIRING FIELD-CHECKING AND EVALUATION

*Following further evaluation these sites were considered to be of regional significance.

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Holland Landing Prairie Relict	31D/3	217865

BRIEF DESCRIPTION

A disturbed sandplain area near Holland Landing has some 24 prairie species, indicating relict prairie vegetation. The area was visited by the botanist John Goldie in 1819 at which time he collected the type specimen of *Ranunculus rhomboideus*, a species which still grows there. Goldie recorded in addition to the *Ranunculus*, *Asclepias tuberosa* (no longer occurs) and *Euphorbia corollata* (which still occurs. The prairie buttercup was once plentiful on prairies and warm, rich slopes but is now rare and local.

SOURCES

Reznicek, A. A., 1977. Seminar at University of Toronto.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
			Cuddy, 1977

ONTARIO NATURE RESERVES PROGRAM
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PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR, WHITNEY BLOCK, QUEEN'S PARK, TORONTO, M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	DeGrassi Point Prairie Relict	31D/4	165005

BRIEF DESCRIPTION

A relatively undisturbed relict prairie-parkland complex on a sandy, till slope reworked by Lake Algonquin. An irregular forest opening of about 1 acre is dominated by *Sorgastrum nutans* and has some 27 species of prairie affinities. On old maps, the point was called Grass or Grassy Point and was used as a rendezvous point by voyageurs.

SOURCES

Reznicek, A. A., 1977. Seminar at University of Toronto

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
			Cuddy, 1977

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR, WHITNEY BLOCK, QUEEN'S PARK, TORONTO, M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Derryville Bog	31D/6	540070

BRIEF DESCRIPTION

Open shrub bog, encircled by treed bog and mixed swamp, fills this large depression (ca. 200 ha) on till plain. About 2.5 km southeast of Derryville and 6 km southwest of Cannington. This bog appears larger, more diverse and less disturbed than two other bogs in the site district - Cavan Bog (31D/8 055040) and Wilfred Bog (31D/6 490100).

SOURCES Lindsay, 1981, Airphoto Interpretation; Riley, 1981, personal communication.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR, WHITNEY BLOCK, QUEEN'S PARK, TORONTO, M7A 1W3

1981

APPENDIX C: DOCUMENTED SITES OF BIOLOGICAL SIGNIFICANCE

1. SITE DISTRICT 6-8: DOCUMENTED SITES OF BIOLOGICAL SIGNIFICANCE LISTED BY 1:50,000 N.T.S. MAP SHEET

1:50,000 N.T.S. maps included in Site District 6-8, listed from west to east, north to south.

31D/5
31D/4
31D/11
31D/6
31D/3
31D/10 - no known sites with background information
31D/7
31D/2
31D/8
31D/1
31D/5 - no known sites with background information

LEGEND TO ABBREVIATIONS

RLSS - Site identified by regional life science study

1. Cuddy, 1977

IBP - Site studied as part of International Biological Program.

API - Site identified by air photo analysis (Environmental Data Card)

1. Bobbette, 1976

ESA - Environmentally sensitive area identified in a report for a regional municipality, county or conservation authority.

1. Northumberland County E.S.A., 1976
2. Cavan Township E.S.A., 1979

SA - Ontario Ministry of Natural Resources Sensitive Areas.

OTHER - Other sources of information.

31D/5 BARRIE	UTM GRID REFERENCES	INFORMATION SOURCE
Barrie Swamp (Minesing)	995110	API
Innisfil	070100	SA
Innisfil Swamp	090045	API,SA
31D/4 ALLISTON		
Tottenham Conservation Area	955745	SA
Cookstown Swamp	090970	SA
Fraser Creek	105785	SA
De Grassi Point Prairie Relict	165005	RLSS
Holland River Mouth-West Marshes	175960	OTHER
Holland Marsh - Cook's Bay	180910	SA, OTHER
Holland River Mouth Peatland	180940	API,OTHER
31D/11 ORILLIA		
Bolsover	530300	
31D/6 BEAVERTON		
Georgina Swamp	420020	SA
Wilfred Bog	490095	IBP,OTHER
Beaverton Swamp	520260	SA
Derryville Swamp	540065	SA,API
31D/3 NEWMARKET		
Holland Landing Prairie Relict	210840	RLSS
Holland Marsh Wetlands	210910	SA
North of Holland Landing	214862	RLSS
Brown Hill Area	310960	SA
West Franklin	340885	SA
Pefferlaw Mud Lake	430940	IBP
Pefferlaw Brook Swamp	430980	IBP
Jim Baillie Nature Reserve	460995	OTHER
Uxbridge Brook Swamp	470000	IBP,API
Beaverton River (Swamp)	540950	IBP, SA
Nonquon River	595860	SA
31D/7 LINDSAY		
Layton River	600040	SA
Goose Lake Wetlands	700210	IBP,SA
Mariposa Creek	735060	SA
Martin Creek Swamp and Esker	740260	IBP
McLaren Creek	770190	API,SA
Goose Bay	790200	SA
Scugog River Marshes	800060	RLSS
East Cross Creek	820030	IBP,SA
Emily Creek Mouth	890280	SA
Feir Mill Pigeon River Swamp	895030	IBP
Pigeon River Headwaters	905030	SA
Hogsback-Fleetwood Creek Swamp	920030	IBP
Emily Lake Swamp	920230	IBP,SA
Hogsback	925050	SA

31D/7 LINDSAY	UTM GRID REFERENCE	INFORMATION SOURCE
Emily Creek	925235	SA
Lower Pigeon River Marsh	960107	RLSS,API
Pigeon Lake Marshes	970150	SA
South West Marsh	975160	API
Pigeon Lake-West Shore Marshes	980200	SA
---	980270	API
---	984240	API
31D/2 SCUGOG		
Nonquon Wildlife Area	610880	SA
---	650930	API
Fingerboard Marsh	660980	RLSS
Pine Point	710905	SA
Valentia Marsh	720000	IBP
---	810915	SA
Pigeon River Swamp	840950	IBP
Bunker Hill Swamp	860920	IBP
Athony Wetland	942020	ESA_2
Jackson Creek Headwaters	970020	ESA_2
Cavan Creek Headwaters	970960	ESA_2
31D/8 PETERBOROUGH		
Peterborough Drumlin Field		OTHER
Pigeon Lake-East Shore Marsh	000190	SA
Cavan Swamp Conservation Area	020045	IBP
Fowlers Corners Marshes	025115	OTHER
Cavan Swamp		ESA_2
Cavan Bog	040060	SA
---	050125	RLSS
Cavan Township Bog	055040	IBP
Miller Creek	110175	SA
Snelgrove Brook	120220	RLSS
Little Lake Area	145080	SA
Lakefield Marsh	165230	SA
Mark S. Burnham Park	175085	SA
Birdsalls Point Marsh	335055	RLSS
Birdsall Heronry	335065	SA
West Ouse River Wetlands	335125	RLSS
Cameron Point Marsh	353057	RLSS
Westwood Ouse River Swamp		IBP
Marshland (Ouse River Mouth Marsh)	360060	IBP,SA
Old White Pine Stand	365135	SA
Rice Lake Woods	385065	ESA_1
31D/1 RICE LAKE		
Cavan Swamp	000020	ESA_2
Cavan Creek Wetland	026976	ESA_2
Cedar Valley Wetland	060940	ESA_2
Kendry Woods	065005	ESA_2
Baxter Creek Lowland	085955	ESA_2
Bailieboro Wetland	095905	ESA_2
Squirrel Lake Conservation Area	115935	SA

31D/1 RICE LAKE	UTM GRID REFERENCE	INFORMATION SOURCE
Squirrel Creek Marsh	130950	API
Bensfort Bridge Swamp	150970	IBP,SA
Stewarts Wood Conservation Area	150982	SA
Campbelltown Marsh	210980	IBP,SA
Hiawatha Indian Reserve Marsh	250970	IBP
McGregor Bay Marsh	265000	IBP
Harris Island Marsh (Park Reserve)	265975	IBP,SA
Indian River Marsh	280010	IBP,SA
Hickory Island	310996	ESA_1
Rock Island	300985	

P. Terpstra, 1980.

2. SITE DISTRICT 6-8: DOCUMENTED SITES OF BIOLOGICAL SIGNIFICANCE LISTED BY PHYSIOGRAPHIC REGION (Chapman and Putnam, 1973)

Physiographic regions within 6-8:

Peterborough Drumlin Field
Schomberg Clay Plain
Iroquois Plain
Simcoe Lowlands
Napanee Plain

PETERBOROUGH DRUMLIN FIELD

31D/5 BARRIE	UTM GRID REFERENCE	INFORMATION SOURCE
Innisfil	070100	SA
Innisfil Swamp	090045	SA
31D/4 ALLISTON		
Cookstown Swamp	095960	SA
31D/6 BEAVERTON		
Georgina Swamp	420020	SA
Wilfred Bog	490095	IBP,OTHER
Derryville Swamp	540065	SA
31D/3 NEWMARKET		
Pefferlaw Mud Lake	430940	IBP
Pefferlaw Brook Swamp	430980	IBP
Jim Baillie Nature Reserve	460995	OTHER
Uxbridge Brook Swamp	470000	IBP
Beaverton River (Swamp)	540950	IBP,SA
Nonquon River	595860	SA
31D/7 LINDSAY		
Layton River	600040	SA
Goose Lake Wetlands	700210	IBP,SA
Martin Creek Swamp and Esker	740260	IBP
McLaren Creek	770190	API,SA
Goose Bay	790200	SA
Scugog River Marshes	800060	RLSS
East Cross Creek	820030	IBP,SA
Emily Creek Mouth	890280	SA
Feir Mill Pigeon River Swamp	895030	IBP
Pigeon River Headwaters	905030	SA
Hogsback-Fleetwood Creek Swamp	920030	IBP
Emily Lake Swamp	920230	IBP,SA
Hogsback	925050	SA
Emily Creek	925235	SA
Lower Pigeon River Marsh	960107	RLSS, API

31D/7 LINDSAY	UTM GRID REFERENCE	INFORMATION SOURCE
Pigeon Lake Marshes	970150	SA
South West Marsh	975160	API
Pigeon Lake-West Shore Marshes	980200	SA
---	980270	API
---	984240	API
31D/2 SCUGOG		
Nonquon Wildlife Area	610880	SA
---	650930	API
Fingerboard Marsh	660980	RLSS
Pine Point	710905	SA
---	810915	SA
Pigeon River Swamp	840950	IBP
Bunker Hill Swamp	860920	IBP
Athony Wetland	942020	ESA_2
Jackson Creek Headwaters	970020	ESA_2
Cavan Creek Headwaters	970960	ESA_2
31D/8 PETERBOROUGH		
Peterborough Drumlin Field		OTHER
Pigeon Lake-East Shore Marsh	000190	SA
Cavan Swamp Conservation Area	020045	IBP
Fowlers Corners Marshes	025115	OTHER
Cavan Swamp		ESA_2
Cavan Bog	040060	SA
---	050125	RLSS
Cavan Township Bog	055040	IBP
Miller Creek	110175	SA
Snelgrove Brook	120220	RLSS
Little Lake Area	145080	SA
Lakefield Marsh	165230	SA
Mark S. Burnham Park	175085	SA
Birdsalls Point Marsh	335055	RLSS
Birdsall Heronry	335065	SA
West Ouse River Wetlands	335125	RLSS
Cameron Point Marsh	353057	RLSS
Westwood Ouse River Swamp		IBP
Marshland (Ouse River Mouth Marsh)	360060	IBP,SA
Old White Pine Stand	365135	SA
Rice Lake Woods	385065	ESA
31D/1 RICE LAKE		
Cavan Swamp	000020	ESA_2
Cavan Creek Wetland	026976	ESA_2
Cedar Valley Wetland	060940	ESA_2
Kendry Woods	065005	ESA_2
Baxter Creek Lowland	085955	ESA_2
Bailieboro Wetland	095905	ESA_2
Squirrel Creek Conservation Area	115935	SA
Squirrel Creek Marsh	130950	RLSS
Bensfort Bridge Swamp	150970	IBP,SA
Stewarts Wood Conservation Area	150982	SA

31D/1 RICE LAKE	UTM GRID REFERENCE	INFORMATION SOURCE
Campbelltown Marsh	210980	IBP,SA
Hiawatha Indian Reserve Marsh	250970	IBP
McGregor Bay Marsh	265000	IBP
Harris Island Marsh (Park Reserve)	265975	IBP,SA
Indian River Marsh	280010	IBP,SA
Hickory Island	310996	ESA
Rock Island	300985	RLSS

SCHOMBERG CLAY PLAINS

31D/4 ALLISTON		
Tottenham Conservation Area	955745	SA
Fraser Creek	105785	SA
31D/7 LINDSAY		
Mariposa	735060	SA
31D/2 SCUGOG		
Valentia Marsh	720000	IBP

SIMCOE LOWLANDS

31D/5 BARRIE		
Barrie Swamp (Minesing)	995110	API
31D/4 ALLISTON		
Cookstown Swamp	090970	SA
De Grassi Point Prairie Relict	165005	RLSS
Holland River Mouth-West Marshes	175960	OTHER
Holland Marsh-Cook's Bay	180910	SA, OTHER
Holland River Mouth Peatland	180940	API,OTHER
31D/11 ORILLIA		
Bolsover	530300	
31D/6 BEAVERTON		
Beaverton Swamp	520260	SA
31D/3 NEWMARKET		
Holland Landing Prairie Relict	210840	RLSS
Holland Marsh Wetlands	210910	SA
North of Holland Landing	214862	RLSS
Brown Hill Area	310960	SA
West Franklin	340885	SA

P. Terpstra, 1980.

APPENDIX D: POLICY FOR AREAS OF NATURAL AND SCIENTIFIC INTEREST

Areas of Natural and Scientific Interest (ANSI) are areas of land and water containing natural landscapes or features which have been identified as having values related to protection, natural heritage appreciation, scientific study or education.

ANSIs may vary in level of significance. The most significant of these may contribute to the achievement of the Ministry's protection objective.

Where ANSIs occur on public lands managed by the Ministry, it will ensure that the land uses and activities which occur, provide for the protection of identified values.

On private lands, the Ministry will, through cooperation with others, attempt to ensure that landowners are aware of significant features on their properties and seek the owners' cooperation in protecting such features. The identification of areas of natural and scientific interest on private land does not indicate an intent of the Ministry to acquire this land.

ANSIs encourage the protection of additional areas not regulated as provincial parks and provide a focus for both the public and private sectors to contribute to the protection of Ontario's natural heritage.

The policy for Areas of Natural and Scientific Interest is taken from *Backgrounder: Land Use Guidelines.* June, 1983.

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Newmarket	31D/3	1970
Alliston	31D/4W&E	1963
Barrie	31D/5	1976
Beaverton	31D/6	1968
Lindsay	31D/7	1968
Peterborough	31D/8	1968
Fenelon Falls	31D/10	1969
Orillia	31D/11	1969
Campbellford	31C/5	1969

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79°30'

45'

30'

15'

79°00'

30

15

LAKE SIMCOE

ORILLIA

Orr Lake

Mount St Louis

Creighton

Prices Corners

Couchon

Jarratt

Hillsdale

Woodland Beach

Wasaga Beach

Springhurst Beach

Jack Lake

Edenvale

Minesing

Sunnidale Corners

Stayner

Sunnidale

Lowell

Cashtown

Creemore

Utopia

Angus

Glencairn

Randa

Camp Borden

CAMP BORDEN MILITARY RESERVE

Thornton

Tiffin

Tiffin

Everett

Mansfield

Alliston

Nicolson

Randall

Thornton

Rosemont

Vader Hill

Elder

Sheldon

Beeton

Loretto

Athlone

Tottenham

Hockley

GULLEY HILL

Penville

Glenville

Bond Head

Bradford

Newton Robinson

Holland Landing

Sharon

Ansnorveldt

Newmarket

Queensville

River Drive Park

Holland River Marsh

Ravenshoe

Cookstown

Crulson

Fennell

Cook Bay

Churchill

Orchard Beach

Kewick

Lefroy

Belhaven

Baldwin

Cedarcroft

Mount Pleasant

Brown Hill

Zephyr

Leaskdale

Sandford

Mount Albert

Silham

Ballantrae

Gunderwood

Pefferlaw

Island Grove

Willow Beach

Jacksons Point

Sibbalds Pt

Snake I.

Fox I.

Ducks Pt

Georgina Island

GEORGINA ISLANDS IR 33

Thorah

Thorah Island

Big Bay Point

Minet Point

Shanty Bay

Crown Hill

Midhurst

Guthrie

Oro Station

Gilchrist

Dalston

Edgar

Craighurst

Pinkston

Coulson

Jarratt

Creighton

Mitchell Square

Hawkestone

East Oro

Rugby

Victoria Pt

Four Mile Pt

McRae Pt

Strawberry I.

McGinnis Pt

Eight Mile Pt

Concord Point

Brechin

Lakeview Beach

Ivan Glen Beach

Rohallion

Victoria Beach

Kirkfield

Mitchell L.

Raven Lake

Canning

Cannington

Point Reserve

Derryville

Vilfrid

Manilla

Sunderland

Vallentyne

Odora

Blackwater

Argyle

Lorneville

Woodville

Grasshill

Glenarm

Cameron

Harvey

Fingerboard

Valentia

Omemee

Newtonbrook Section

Greenbank

Port Perry

Manchester

Oshawa

Whitby

Pickering

Ajax

Brock

Scugog

Scugog River

Scugog I.

Little Britain

Manilla

Derryville

Sunderland

Blackwater

Leaskdale

Zephyr

Mount Albert

Sandford

Greenbank

Port Perry

Cannington

Lorneville

Woodville

Grasshill

Glenarm

Cameron

Harvey

Fingerboard

Valentia

Omemee

Newtonbrook Section

LINDSAY
PETERBOROUGH
GOOSE LAKE WETLANDS
EMILY RIVER SWAMP
CAWAN BOG
MATHERS - FLEETWOOD CREEK VALLEY
CLUDDG MARSH
HILLVALLEY FOREST
SHELTER VALLEY
CRANAHE HILL
ALNWICK INDIAN RESERVE 17
RICE LAKE IR 16
BALSAM LAKE
MUD LAKE
STURGEON LAKE
PIGEON RIVER
OTONABEE RIVER
CANADIAN
NATIONAL
PACIFIC
TRANS-CANADA
Lakefield
Bridgenorth
Douro
Asphodel
Indian River
Westwood
Millbrook
Omemee
Downeyville
Fenelon Falls
Kirkfield
Bobcaygeon
Lakehurst
Kawartha Park
Gilchrist Bay
Hall Glen
Centre Dummer
Round Lake
Campbellford
Brighton
Warkworth
Harwood
Norham
Havelock
Peterborough Golf & Country Club
Peterborough Canoe Club

CANDIDATE NATURE RESERVES AND SIG

Site District boundary

Physiographic Region boundary

Candidate Nature Reserve

Significant Site

Sites requiring Field-checking and Evaluation

Drawn by P. Terpstra

Date February 1982

The name "Candidate Nature Reserve" was changed to "Area of Natural and Scientific Interest (ANSI)" in 1985.

Kilometres Scale 1:250,000

5 0 5 10 15

Candidate Nature Reserves

UPLANDS

DRUMLIN

-Harris Island Park Reserve Proposed Marshland/Drumlin Island Addition (31D/1 265973)

POST-GLACIAL SHORELINE

-Allandale Lake Algonquin Bluffs (31D/5 010100)

WETLANDS

MARSH

-Harris Island Park Reserve Proposed Marshland/Drumlin Island Addition (31D/1 265973)

-Scugog Marsh (31D/2 670830)

-Holland River Marsh (31D/4 180940)

BOG

-Cavan Bog (31D/8 055040)

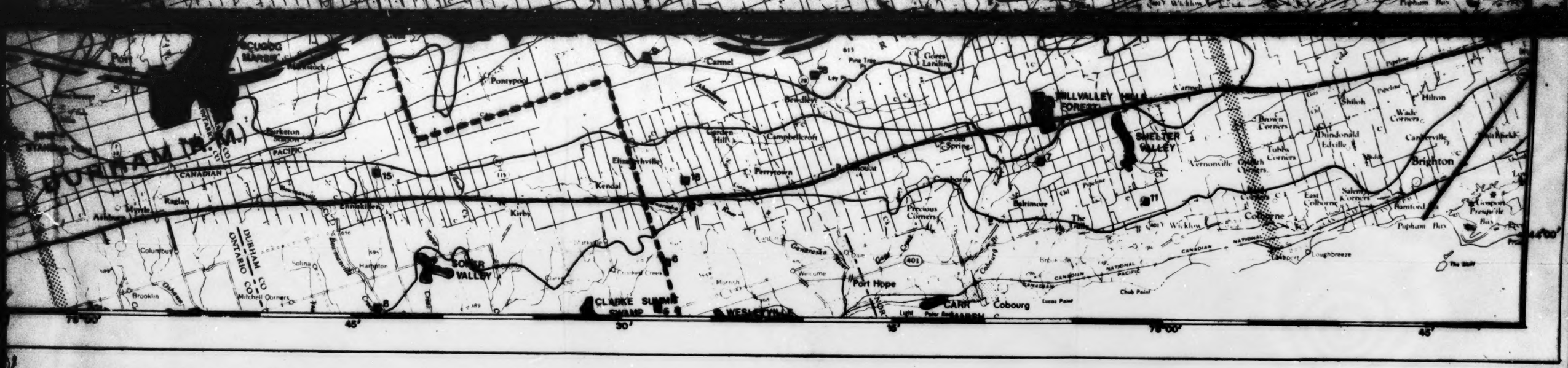
SWAMP

-Gobose Lake Wetlands (31D/7 700210)

-Emily River Swamp (31D/7 925220)

Provincial Park Holdings with Nature Reserve Potential

-- Harris Island Park Reserve (31D/1 265973)



TURE RESERVES AND SIGNIFICANT SITES IN SITE DISTRICT 6-8, WITHIN CENTRAL REGION

Significant Sites

UPLANDS

DRUMLINS

1. Westwood Drumlin (31D/8 330120)
2. Morrow Bay Woods (31D/8 365045)

WETLANDS

MARSH

3. Valentia Marsh (31D/2 720000)
4. Pigeon Lake Marsh (31D/7 985150)
5. Indian River Marsh (31D/1 280010)
6. Birdsall Point Marsh (31D/8 335055)
7. Ouse River Marsh (31D/8 360060)

BOG

8. Wilfred Bog (31D/6 490100)

SWAMP

9. Zephyr Creek (Georgina) Swamp (31D/6 390030)
10. Pefferlaw Brook Swamp (31D/3 435950)
11. Beaverton River Swamp (31D/3 540940)
12. Martin Creek Swamp (31D/7 740260)
13. East Cross Creek Swamp (31D/7 820030)
14. Cavan Creek Headwaters (31D/2 970960)
15. Cavan Creek Wetlands - Kendry (31D/1 050980)

Sites requiring Field-checking and Evaluation

UPLANDS

SAND PLAIN

1. DeGrassi Point Prairie Relict (31D/4 165005)
2. Holland Landing Prairie Relict (31D/3 217865)

WETLANDS

BOG

3. Derryville Bog (31D/6 540070)

Sources of Information

Physiographic region boundaries used on this map follow those of Chapman and Putnam, 1966. Site District boundaries presented here were derived from an unpublished small scale map provided by Forest Site Research. Boundaries were extrapolated and are thus only approximations of Site District boundaries. Please refer to the Site District 6-8 report (Areas of Natural and Scientific Interest in Site District 6-8: A Review and Assessment of Significant Natural Areas in Site District 6-8 by R. Hanna, 1984) for further information.